in 11 years and implying an annual growth rate of 1.8 percent. The population indicators, as compiled from Eighmy, are given in Table II.3.

Based on the estimates provided by Eighmy the population density for various districts in 1979 and 1990, in the latter year with and without refugees, has been worked out and presented in Table II.4.

Table II.4: Population Density - 1979 & 1990

Name of District	Population/ sq.km. 1979	Population/ sq.km. 1990	Population/ sq.km. 1990 Adj.
Darai Soof	17.4	21.6	21.6
Hazrat Sultan	19.5	22.8	16.9
Kaldar	13.4	15.0	14.6
Khulm	11.2	14.1	13.4
Roi Doab	7.9	9.9	9.4
Samangan	24.1	28.9	26.3
Province	15.4	18.8	17.6

Source: Compiled from Eighmy, 1990

The population density of the province increased by 22 percent in 11 years during 1979-90. The increase in population density for the districts over the same period is 24 percent for Darai Soof, 17 percent for Hazrat Sultan, 11.9 percent for Kaldar, 25.9 percent for Khulm, 25.3 percent for Roi Doab and 19.9 percent for Samangan. All the above figures for population density are inclusive of the refugee population. The density for the province without the refugees is 17.6, meaning that there are 1.2 refugees every square kilometer in the province.

II.2 Refugees

II.2.1 Number of Refugees

A total of 19,556 persons from the province became refugees, 93 percent of whom are based in Pakistan. The rest of 7 percent have gone to Iran. The refugees make up 6.2 percent of the province's 1990 population.

For Afghan refugees in Pakistan, the estimates based on the UNHCR survey

conducted in 1988-89 show that a total of 2,474 families from Samangan province have taken refuge in Pakistan. Using a constant household size of 6 members per household, the UNHCR estimates the number of refugees from the province to be 14,844, making 0.55 percent of all Afghan refugees in Pakistan.

In a report on demographic trends in Afghanistan and in Afghan refugees, Yusuf has argued that the more realistic estimate of the family size of Afghan refugees would be 8.5, as established in a study conducted by the UNRISD in 1986 (Christensen and Scott,1988). In support of his argument, he quotes a study by Krijgh where it was shown that the fertility of Afghan women in refugee camps was much higher than that of the Afghan women inside Afghanistan. The study was based on a survey of Afghan refugees women in camps in Kohat, NWFP (Krijgh,1987). He further criticizes the estimate of the family size of 6.2 based on the statistics compiled by the Government of Pakistan on the basis of registration cards. The registration card is required to be filled before a ration card is issued to a refugee family. He points out that the restrictions imposed by the Pakistan government of not registering more than seven members of a family, irrespective of the actual number of family members, and of not registering the children born in Pakistan to the refugee women would understate the family size in the official statistics (Yusuf,1989,pp.5-7).

If the family size of 8.5 members advocated by Yusuf is accepted, the number of refugees from Samangan in Pakistan alone would rise by about 42 percent over the UNHCR figure to 21,029. This number is also larger than the estimate of 18,156 refugees in Pakistan provided by Eighmy.

III.2.2 Origin of Refugees

In terms of the refugees' district-wise distribution, the UNHCR survey shows that 6 are from Darai Soof, 5,484 from Hazrat Sultan, 258 from Kaldar, 2,412 from Khulm, none from Roi Doab and 6,684 from Samangan. In Pakistan, 44 percent of the refugees are based in Punjab province, 36.1 percent in the North-West Frontier Province and 19.9 percent in Baluchistan province.

According to Eighmy's estimates, the largest exodus took place from Hazrat Sultan district where the refugees comprise 25.8 percent of the district's population in 1990. From other districts, the proportions of refugees are 9 percent for Samangan, 4.9 percent each in Khulm and Roi Doab and 2.75 percent for Kaldar.

The UNIDATA survey of 8 main villages per district also determined population movements of various kinds (see Table II.5). The information about population movement in various districts represents aggregates of village level data.

In all, 1,169 persons from the 40 surveyed villages in the province have become refugees in Pakistan and Iran, the share of the two countries being 96 percent and 4 percent, respectively. The proportional distribution of refugees from the province in the two

countries given by Eighmy is 93 percent for Pakistan and 7 percent for Iran, which is quite close to the UNIDATA findings. There are significant differences between the two sources, however, in case of the district-wise origin of the refugees. According to the UNIDATA, about 69 percent of the refugees in Pakistan have originated from Khulm district whereas Eighmy's (and UNHCR's) findings show that Samangan district has the greatest contribution of 45 percent in the total refugee population from the province in Pakistan. According to the latter sources, the other two districts with prominent share are Hazrat Sultan and Khulm from where 37 percent and 16 percent, respectively, of the refugees have moved to Pakistan. According to the UNIDATA findings, Roi Doab and Samangan are the other two major districts of refugee origin with 18 percent and 8 percent, respectively, of the refugees in Pakistan from the province. These discrepancies exist because although both the UNHCR and the UNIDATA findings are based on field surveys (Eighmy's estimates are based on the UNHCR survey), there is a time gap of two years between them. The method of data collection used by the two agencies is also different. Whereas the UNHCR estimates are derived from survey of refugees in the camps, the UNIDATA survey results are based on the information collected inside Afghanistan.

Table II.5: Population Movement to and from Samangan

Population Movement Towards..		Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan
Pakistan	%	3.7	1.1	69.2	17.8	8.2
	No.	41	12	775	199	92
Iran	%	54.0	0.0	10.0	36.0	0.0
	No.	27	-	5	18	-
Afghanistan	%	13.4	9.5	15.1	45.1	16.8
	No.	62	44	70	209	78
Samangan"	%	6.6	0.0	0.0	76.1	17.2
	No.	72	-	-	830	188
Samangan""	%	33.5	0.0	0.0	66.5	0.0
	No.	56	-	-	111	-

Note: Samangan" = to Samangan from areas in Afghanistan
Samangan""= to Samangan from Iran and Pakistan

Source: UNIDATA, June-October, 1990

The table also shows that 463 persons from the main villages surveyed have

shifted to other provinces in Afghanistan, 45 percent of whom are from Roi Doab. A total of 1,090 persons have also moved into those villages from other provinces, 76 percent of whom are accommodated in Roi Doab. An additional 167 persons have returned to the villages from Pakistan and Iran, about 67 percent of them settling in Roi Doab. The district of Roi Doab has, therefore, witnessed substantial population movement, more than any other district in the province.

II.3 Effects of War on Population

In the UNIDATA survey of localities, the effects of war on population were assessed in terms of loss of life and disability. The figures presented at Table II.6 are cumulative of the findings of 8 main villages in each district.

Table II.6: Effects of War on Population

Name of District	% Killed	No. Killed	% Disabled	No. Disabled	No. of Widows	No.of Orphans
Darai Soof	6.7	2,450	1.3	492	890	2,090
Hazrat Sultan	1.6	253	0.8	121	185	696
Khulm	1.6	163	0.7	70	110	380
Roi Doab	2.0	1,529	1.2	980	819	2,905
Samangan	1.6	465	0.5	145	343	1,278

Source: UNIDATA, June-October, 1990

Darai Soof district is most affected by the war as 6.7 percent of the population in the 8 main villages surveyed there has died and another 1.2 percent has become disabled because of the war. The dead have left behind 890 widows and 2,090 orphans in the said villages. The district next affected by the war is Roi Doab where 2 percent of the population in the 8 main villages has died and another 1.2 percent has become disabled. The widows and orphans there number 819 and 2,905, respectively. The main villages covered by the survey in Hazrat Sultan, Khulm and Samangan have lost an equal proportion of population, 1.6 percent of the total, and 0.5-0.8 percent of the population in the three districts is rendered disabled. The number of widows and orphans is much larger in Samangan than the other two districts.

II.4 Location of Mines

In the UNIDATA survey of localities, location of mines in and around the surveyed villages was also enquired. The mined areas and types of mines, as reported by

the local people, are given in Table II.7.

Table II.7: Location and Types of Mines

Name of District	Type of Mines
Khulm	MK7
Roi Doab	PGM-OM, PMN, OZM3

Source: UNIDATA, June-October, 1990

Very few mined areas were reported during the survey. In Khulm district, MK7 mines are found in village Ghuzar-i-Namazgah. The PGM-OM, PMN and OZM3 mines in Roi Doab are found in the district center bearing the same name as the district.

Mines were also reported at Kotal-i-Robatak in Samangan district. Some areas in the district around the main highway leading to the Soviet border are also mined. There are also reports of some areas around the same highway falling in Hazrat Sultan district being mined. There were unexploded bombs in some areas which have been neutralized by the local people.

III. FOOD SUPPLY

III.1 Situation of Food Supply

According to a survey conducted by the Swedish Committee for Afghanistan (SCA) in 1990, an average farmer in Samangan province purchases above one quarter of his family's wheat supplies from the market. Wheat has to be purchased from traders outside the village. In 1990, 94 percent of the farmers in the province declared that they were living below subsistence level while 2 percent considered themselves to be above that level. The assessment by farmers may partly be linked to the locust attack on rain fed wheat which affected 40 percent of the farmers in 1989. As a result, the average yield of rain fed wheat dropped from 7 seers (1 seer=7 kilogram) per jerib in 1989 to 5.1 seers per jerib in 1990. As 65 percent of the farmers grow rain fed wheat alone, and another 16 percent grow it only on part of their lands, the low yields are expected to cause greater food deficit and greater off-farm food purchases in the coming year (SCA,1990e,p.10; for comments on SCA survey methodology, see Annex.'C').

In **Darai Soof** people sell sheep and goats in the market to purchase food. Situation regarding the food supply has been so fragile that while there were no significant population movements in the district due to the war, some families have migrated to other areas inside the country due to the food shortage. According to the SCA survey, the average amount of wheat purchased in the market was 131 seers per family in 1989. Also, nearly a quarter of the farmers sold an average amount of 70 seers of wheat that year. During the same year, 59 percent of the families in Darai Soof declared that they were facing food deficit and that was mainly caused by the locust attack on rain fed land. The average yield of wheat in the district because of the crop damage came down from 9.8 seers per jerib in 1989 to 9.5 seers per jerib in 1990. Wheat was purchased by 54 percent of the farmers in 1990, 55 percent of whom had to do it from sources outside the village. Since the price of wheat in the district was Afs.1,213 per seer, the total cost of purchasing 131 seers of wheat by an average farming family would amount to Afs. 158,903 . In 1990 again there was a sudden influx of the Sunn pest affecting 45 percent of the farmers which could lead to serious food deficit in the district, and greater expenditure per family for wheat procurement (SCA,1990e,p.11).

Khulm district suffered losses in crop production because of inadequate rain in 1990, according to the SCA survey. In 1989, 61 percent of the farmers reported wheat deficit which was related to the locust attack on irrigated wheat. An average amount of 52 seers of wheat had to be purchased by 60 percent of the farmers to cover their food deficit. At the price of Afs.1,042 per seer of wheat it would have cost an average family Afs.54,184 in 1989 to purchase extra wheat to meet the deficit. Surplus wheat was sold only by 7 percent of the farmers, the average amount sold by them being 34 seers. At the time of the survey there were indications that situation regarding the Sunn pest and locust attacks had improved which might lead to a better crop in 1991 (SCA,1990e,p.12). The UNIDATA survey found that the district is better placed in terms of fruit production, and its high quality

fruit is being exported to Kabul, India and Pakistan.

According to the SCA survey, in **Roi Doab** food deficit in years 1989 and 1990 was closely linked to the damage caused to rain fed wheat. In 1989, 92 percent farmers reported food deficit and 87 percent farmers purchased food to cover that deficit. Another 6 percent declared that they were self-sufficient in food. The proportion of farmers reporting wheat deficit was 78 percent in 1990 but the damage to crops was greater that year than the previous year. That is demonstrated by a decrease in the yield on rain fed wheat which came down from 8.6 seers per jerib in 1989 to 4.9 seers per jerib in 1990. The yield loss would necessitate purchases of large quantities of wheat by farmers in 1990 and 1991. The average amount of wheat purchased per family was 138 seers in 1990. At a cost of Afs.1,185 per seer, total expenses of an average family on purchase of wheat would be equal to Afs.163,530. No farmer reported any sale of wheat in 1990. Keeping in view the low yield for 1990 expenses on wheat purchase would be much higher for 1991 (SCA,1990e,pp.11-12). The UNIDATA survey reports that sufficient food is not available locally and it has to be supplied from Mazar-e-Sharif and Aibak. Prices of food items also go up in the winters because roads are blocked due to the snow. The number of sheep and cattle has decreased tremendously in the district due to the war. That would add to the food deficit caused by the shortage of wheat.

The UNIDATA survey found that the situation regarding the food supply varies between districts in the province. **Samangan** is the only food exporting district, and wheat, mung beans, and melons are exported from there to other areas in Afghanistan. The district also exports fruit to domestic and foreign markets.

The situation in the three districts of Samangan province covered by the SCA survey regarding food deficit, wheat supply, market price of wheat etc. is summarized in Table III.1.

Table III.1: Situation of Wheat Supply

Status of Farmers	Darai Soof	Khulm	Roi Doab
Wheat deficient farmers (%)	59	61	92
Farmers purchasing wheat (%)	54	60	87
Amount purchased (seers)	131	52	138
Average price/seer (Afs)	1,213	1,042	1,185
Average cost (Afs)	158,903	54,184	163,530

Source: Compiled from SCA, 1990e

The food items reported to be in short supply, according to the UNIDATA survey, are listed in Table III.2

Table III.2: Food Items in Short Supply

District	Food Items in Short Supply
Darai Soof	Wheat, beans, dry milk, lentils, spinach
Khulm	Wheat, dry milk, lentils
Hazrat Sultan	Beans, dry milk, lentils, spinach
Roi Doab	Wheat, mutton, beef, lentils, dry milk, spinach
Samangan	Dry milk, lentils, spinach

Source: UNIDATA, June-October, 1990

III.2 Prices of Food Items

There is a great deal of variation in the prices of various food items in different districts. Roi Doab is the most expensive district where 7 out of 15 food items given in Table III.3 were selling at the highest prices in the province. There were 4 items selling at the highest price in Hazrat Sultan district but 5 most important food items, mostly cereals, were selling there at the lowest rates.

The table also shows that 5 of the listed items are the cheapest in Darai Soof. In Khulm, 3 items have the highest prices and a similar number have the lowest prices in the province. The average price and the price range of the food items in the province are given in Table III.4.

Table III.3: Prices of Selected Food Items

(prices in Afs./kg)

Food Items	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Samangan
Wheat	123	96	116	164	123
Barley	134	82	82	137	82
Rice short	315	315	274	342	315
Rice long	274	219	247	301	274
Maize	96	82	110	123	82
Potato	49	27	96	82	55
Edible oil	767	603	479	548	548
Tea black	1,200	2,600	1,342	1,400	2,000
Tea green	1,300	2,200	1,370	1,500	1,800
Sugar	219	479	479	534	329
Salt	41	55	21	55	19
Beef	500	616	600	479	616
Mutton	600	822	1,000	671	959
Chicken	800	1,000	1,500	1,000	1,000

Source: UNIDATA, June-October, 1990

Table III.4: Average Price and Price Range of Food Items

(prices in Afs./kg)

Food Item	Average Price	Price Range
Wheat	124	96 - 164
Barley	103	82 - 137
Rice short	312	274 - 342
Rice long	263	219 - 301
Maize	99	82 - 123
Potatoes	62	27 - 96
Edible oil	589	479 - 767
Tea black	1,708	1,200 - 2,600
Tea green	1,634	1,300 - 2,200
Sugar	408	219 - 534
Salt	38	19 - 55
Beef	562	479 - 616
Mutton	810	600 - 1,000
Chicken	1,060	800 - 1,500

Source: UNIDATA, June-October, 1990

For most food items the price range is quite wide. These prices reflect the supply situation at a given time which in turn is determined by the security conditions in the area. Further, the extensive damage to the infrastructure and transportation system due to the war also obstructs smooth supply of the goods. If the average prices of some of the items are compared to the price data generated by the VITA, the inflationary trend in prices looks acute. Mutton was selling at an average price of Afs.260 per kg in June 1987 but in 1990 the price shot up to Afs.810 per kg. Beef in June 1987 was selling at Afs.145 per kg but its price in 1990 had risen to 562 per kg. The price of wheat in June 1987 was Afs.29 per kg but its price in 1990 had jumped up to Afs.124 per kg (for 1987 prices, see VITA,1990.n.p.; for 1990 prices, see Table III.4).

The steep rise in prices of food items in Afghanistan over time and the regional variation in prices have also been reported by another source. In the Orkand

BASIC STATISTICS - SAMANGAN PROVINCE

Area and Geography:

Area:	15,465 square kilometers
Altitude Range:	305 - 2,230 meters
Capital:	Samangan (centre: Aibak)
No. of Woloswalis:	4 (Darai Soof, Khulm, Roi Doab, Samangan)
No. of Alaqadaris:	2 (Hazrat Sultan, Kaldar)
Planning Region:	North
Bordering Provinces:	Balkh, Jowzjan, Bamyan, Baghlan, Kunduz

Population:

Population 1979:	261,693
Population Density 1979:	17 per square kilometer
Population 1990 (without refugees):	292,968
Population Density 1990 (without refugees):	17.6 per square kilometer
Refugees in Pakistan 1990 (estimated):	18,156
Refugees in Iran 1990 (estimated):	1,400
Urbanization:	12.6 percent

Resource Base:

Agricultural Products & Natural Resources:	Wheat, potato, fruits & forests
Main Industrial Products:	Woolen carpets & rugs, leather & leather goods, karakul skin, vegetable oil
Mineral Resources:	Coal and copper ore

Corporation Report (cited in Nathan and Berger,1990,n.p.), the average wheat price per kilogram in the Northern provinces (Samangan being one of them) ranged from Afs.38 to Afs.59 in April/May 1987. In Samangan province, the price of one kilogram of wheat jumped from Afs.18 in April/May 1985 to Afs.51 in the same months in 1987, signifying a 183 percent increase over the two years period. The source citing the Orkand Corporation Report does not mention how the data on prices was collected. However, if the prices provided represent the whole province, then since April/May 1987, the average price of wheat has increased by 143 percent over 3 years-and-a-quarter, according to the wheat price reported by UNIDATA.

Another significant source on prices in Afghanistan is the United Nations High Commission for Refugees (UNHCR). In a report circulated in May 1990, the prices of a variety of items have been presented using diverse sources (UNHCR,1990). The methods employed in data collection by the sources included in the report vary significantly from one another, though the report does not dwell on this issue.

Goat, sheep and cows are also an important source of food in the province. The animals are used for direct consumption as well as a means of exchange to purchase wheat and cereals. Although there are big pastures only in the districts of Khulm and Roi Doab, yet cows, sheep and goat are available in all the districts without a significant difference in the prices of these animals, as shown in Table III.5.

Table III.5: Prices of Animals

(prices in Afs.)

Item	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Samangan
Cow	110,000	110,000	100,000	100,000	100,000
Sheep	20,000	20,000	20,000	25,000	20,000
Goat	15,000	18,000	12,000	15,000	14,000

Source: UNIDATA, June-October, 1990

Cows were selling for Afs.100,000 in the districts of Khulm, Roi Doab and Samangan and for Afs.110,000 in Hazrat Sultan and Darai Soof. The highest price for sheep was Afs.25,000 in the district of Roi Doab whereas in rest of the districts it was selling for Afs.20,000. Goat was selling at the highest price of Afs. 18,000 in Hazrat Sultan and at the lowest price of Afs.12,000 in Khulm district.

IV. AGRICULTURE AND ANIMAL HUSBANDRY

IV.1 Physical Resources

Land in Samangan province consists of mountains, valleys, pastures and flat areas. Two small rivers with meager supply of water pass through the province, which during the summers become almost dry. Differences in the physical resource base of different districts are related to their share of mountains, pastures and flat land. In spite of apparent differences in the physical characteristics of various districts there are no significant corresponding variations in the productivity of agriculture. Most of the cultivable land in the province is non-irrigated with desert like climate. Fertility of land, productivity of major crops and provision of water for irrigation in the province are lower than the national averages. Therefore, most of the districts are deficient in food, Samangan being the only food surplus district.

Darai Soof district is mountainous and most of its area is located in deep valleys. There are large pastures around the mountains. In the summers the livestock owners, especially the people living near the mountains, shift to the pastures. Greater portion of the land is non-irrigated.

A flat desert area covers the district of **Hazrat Sultan.** The summers are hot and the winters are slightly cold here. Most of the district is non-irrigated and rain is the only source of water for irrigation.

Khulm district comprises of an almost flat area, but its southern part consists of a mountain range called Alburz. It has snowfall in the winters but it is hot and dry in the summers. The irrigated area in the district is less than the non-irrigated area. The source of water for agriculture is a small river coming from the Aibak mountains. There is also a large pasture area in the district as well.

The district of **Roi Doab** consists of valleys surrounded by pastures and high mountains. The summers here are warm but there is considerable snowfall during the winters. The district does not have much irrigated land and most of the crops are grown in non-irrigated areas around the mountains. There are many pastures near the hills and mountains.

In district **Samangan** both irrigated and non-irrigated land is used for cultivation. Non-irrigated areas depend mainly on winter and spring rains. There is a little snowfall in the winter and the summers are warm and dry.

IV.2 Farming System and Land Tenure

According to the UNIDATA survey findings of the 10 landholders in each main village, 66 percent of the cultivable land is used for seasonal crops in Samangan

province. Another 32 percent of the land is kept as fallow and the rest of 2 percent is used for orchards, as shown in Table IV.1.

Table IV.1: Use of Agricultural Land

(area in jeribs)

Land Use	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan	Total
Total Area	2,474	3,141	652	6,036	405	12,708
Seasonal Crops (%)	1,524 (62)	3,120 (99)	522 (80)	2,916 (48)	357 (88)	8,439 (66)
Orchards (%)	-	21 (1)	113 (17)	30 (1)	48 (12)	212 (2)
Fallow (%)	950 (38)	-	17 (3)	3,090 (51)	-	4,057 (32)

Source: UNIDATA, June-October, 1990

The proportion of land allocated for different purposes varies considerably from one district to another. Whereas in Hazrat Sultan 99 percent of the cultivable land is used for seasonal crops, only 48 percent of it is allocated for that purpose in district Roi Doab. In the case of orchards, the lowest share of land- one percent- is allocated in the districts of Hazrat Sultan and Roi Doab and the highest share- 17 percent- is provided in Khulm district. Khulm has the smallest share of land, 3 percent, for fallow land and Roi Doab has the largest fallow area which is 51 percent of its agricultural land.

Although the relative share of land allocated for different purposes varies between the districts, the general pattern of land usage is the same. Seasonal crops assume the largest share of the cultivable land, followed by the fallow land and orchards. Hazrat Sultan and Khulm are the only districts where a greater share is allocated to orchards than the fallow land.

According to the survey by the Swedish Committee for Afghanistan (SCA), in 1989 in Samangan province the average number of persons per household was 9. On average, there were 5 adults and 1.3 farm workers per household (SCA,1990c,Table 62,n.p.; for comments on SCA survey methodology, see Annex.'C'). Of the total farmers in the province, 68 percent were owner occupiers, 18 percent were sharecroppers, 7 percent were owner occupiers cum sharecroppers, 3 percent were tenants, 2 percent were caretakers and one percent were owner occupiers cum tenants (SCA,1990c,Table 64,n.p.). The average farm size for cultivated land was 24.5 jeribs for owner occupiers, 30.3 jeribs for

sharecroppers, 42.3 jeribs for tenants only, 31.7 jeribs for owner occupiers cum share croppers and 66.5 jeribs for owner occupiers cum tenants (SCA,1990c,Table 65a,n.p.).

IV.3 Irrigation System

The irrigation system in Samangan province consists of two small rivers, karezes, canals, juis, springs, water reservoirs and pools. The rivers have very limited supply of water and become almost dry in the summer. Water reservoirs and pools are used to store rain water and melted snow and karezes are used as channels for the stored water. The reservoirs are made of mud and need to be replaced by concrete structures for efficient and clean storage of water. There is a scarcity of water for irrigation in most of the districts; therefore, of the total cultivable area, non-irrigated area is greater in size than the irrigated area. No damage to the irrigation system due to the war has been reported in the province but some juis have been damaged due to flooding in Darai Soof district.

In **Darai Soof** district irrigated land consists of a smaller portion of the total cultivable land. Water from juis and springs, located at the foot of the mountains, is used for irrigation purposes. There is a small river in the district called Darai Soof river; it has very little water and in summers it turns dry. Water from melted snow is led to farms through juis. Many juis were damaged due to floods and are in need of repairs and cleaning. People in Darai Soof have also made some basins near the mountains to preserve water from rain and melted snow. These basins are in need of concrete structures for storing drinking water.

Most of the land in **Hazrat Sultan** district is non-irrigated. People store rain water in small pools for irrigation purposes. There is a shortage of water and even drinking water is scarce.

The irrigated area in **Khulm** district is less than the non-irrigated area. Irrigation system in the district consists of juis and canals. There is also a small river coming from the Aibak mountains. At Tangi a spring joins the river and the water comes to Tajurgan area.

The district of **Roi Doab** also does not have much irrigated land. For irrigation the farmers use water from juis, springs and snow. In non-irrigated areas farmers have to rely on rain for good harvest.

Samangan district has both irrigated and rain fed land. Winter and spring rains are the main source of water for non-irrigated land. Karezes, canals and juis bring water to irrigated lands. Although the river Aibak passes through the district, it does not have enough water and becomes dry during the summer. Therefore, there is a frequent shortage of water for the irrigated lands. At some pastures people store water in underground reservoirs for use of their cattle and sheep during the summer.

The use of various sources of irrigation in different districts is presented in Table IV.2. The figures provided represent the number of facilities found in 8 villages surveyed in each district by UNIDATA.

Table IV.2: Irrigation Facilities

Facility	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Samangan
Tubewells	-	28	-	-	-
Wells	60	104	840	236	13
Springs	70	34	-	7	19
Karezes	170	-	-	-	-

Source: UNIDATA, June-October, 1990

The table shows the relative use of various water sources for irrigation in different districts. Tubewells are mostly used in Hazrat Sultan, whereas wells are in use in all the districts. The largest use of wells is in Khulm; comparatively to a much lesser extent, wells are also used in Roi Doab and Hazrat Sultan but their use is quite restricted in Darai Soof and Samangan. The use of springs is mostly common in Darai Soof, Hazrat Sultan and, to a lesser extent, in Samangan. The district making an extensive use of karezes is Darai Soof; no other district in the province makes any significant use of that water channel.

IV.4 Crop Production

According to the SCA survey, rain fed wheat was the most important crop in Samangan province in 1978. An average farm used 41 jeribs for cultivation of rain fed wheat in that year. The average area and yield per jerib fell for rain fed and irrigated wheat and most other crops between 1978 and 1990. As no farmer used fertilizer on rain fed wheat, the decline in cultivated area was probably due to the scarcity of labor and farm power caused by the war. The average area in jeribs used for different crops in 1990 was 22 in case of rain fed wheat, 7 for barley, 6 for irrigated wheat and 5 for linseed and peas. The proportion of farmers growing various crops was 80 percent for rain fed wheat, 81 percent for barley, 20 percent for irrigated wheat, 18 percent for linseed and 13 percent for peas (SCA,1990c,p.164). Yields for both irrigated and rain fed wheat, the amount of fertilizer applied per jerib and proportion of farmers applying fertilizer in Samangan province were all below the national or even the zonal average. Other crops grown in the province were melon and grapes with an average area of 3 jeribs allocated to each crop. Apples and clover were grown on an average area of 2 jeribs each. Only one jerib per crop was allocated to maize, alfalfa, almond, onion, sesame, mung bean, vegetables, potatoes,

walnut, pomegranate, cotton and tobacco (SCA,1990c,p.164 & SCA,1989b,pp.28-29).

The main crops grown in **Darai Soof** district are wheat, barley, corn, potato, clover, alfalfa and melon. Yields of those crops are reported to be very low due to the non-availability of fertilizer, improved seeds, insecticides and agricultural equipment. Recently there has been an increase in weeds in farms bringing the yield of various crops further down. According to the SCA survey, in 1990, 40 percent of the farmers reported losses of up to a quarter of their rain fed wheat crop, and another 5 percent reported losses above that level, due to the Sunn pest. Locust damage to rain fed wheat affected 49 percent of the farmers in 1989 and 32 percent farmers in 1990. The Sunn pest damaged 37 percent of the barley crop in 1990 whereas 30 percent farmers were affected by the locust damage that year. However, no Sunn pest or locust damage was reported on irrigated wheat (SCA,1990d,p.9).

The crops cultivated in **Khulm** are wheat, barley, corn, and melon. In most of the non-irrigated area people cultivate dry wheat (Gandum Lalmi), water melon and flux seeds. In the irrigated areas people cultivate more fruits than cereals. In Tajurgan area there are many orchards of apple, almond, grape, plum, pomegranate, peach, pear, apricot and anjeer. Pomegranate, almond and raisin are exported from Khulm to Kabul, India and Pakistan. According to the SCA survey, the Sunn pest damage to irrigated wheat in the district affected 14 percent of the farmers in 1990. In 1989, 4 percent of those who grew the crop lost their entire harvest due to the pest problem. In 1989, 22 percent of the farmers reported crop losses due to locust, of which half had lost almost all their harvest. In 1990, only 4 percent farmers reported crop losses and the level of loss also came down. On rain fed wheat 4 percent of the farmers reported some loss due to the Sunn pest and 6 percent due to locust. In case of barley, Sunn pest damage affected 18 percent and locust another 4 percent of the farmers. Damages due to locust showed considerable improvement in 1990 as compared to 1989, when 20 percent of the farmers reported losses and 3 percent farmers lost their entire crop (SCA,1990d,p.9).

The crops grown in **Hazrat Sultan** district are wheat, barley, clover, alfalfa, millet and sesame.

Wheat is the main crop in **Roi Doab** district. Other crops grown in the district are barley, corn, alfalfa, clover, sesame, potato and melon. Some farmers also grow apples, apricots, cherries and pears. Most of the crops are grown in non-irrigated areas. There are many pastures around the hills but the number of sheep and cattle have decreased tremendously due to the destruction caused by the war. There are shortages of chemical fertilizer, pesticides, farm equipment, improved seeds and veterinarians in the area. Pests and weeds are very common. According to the SCA survey no Sunn pest damage is reported on irrigated and rain fed wheat or barley by farmers in Roi Doab in 1990. Locust damage to rain fed wheat was reported by 82 percent farmers in 1989 and by 78 percent farmers in 1990, though the severity of the loss was greater in the latter year. Locust damage also affected 84 percent of the farmers growing barley in 1989, though the

percentage of affected farmers came down to 75 in 1990 (SCA,1990d,p.10).

In **Samangan** district people cultivate wheat, flux seed, vegetable, sugar beat, mung bean, corn millet and melon in the irrigated areas. In non-irrigated areas wheat (Gandum Lalmi), peas, flux seed, mung bean and melon are grown. Wheat, mung bean, peas, and melon are exported to other areas of Afghanistan, especially Kabul. Edible oil is produced from sesame, flux seeds and cotton seeds. The fruit crops produced in the district are apricot, grape, almond and pistachio which are exported to markets inside Afghanistan as well as abroad.

The areas under various seasonal crops in the main villages surveyed in each district are given in Table IV.3.

Table IV.3: Seasonal Crops and Area Under Cultivation

(area in jeribs)

Crops	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Samangan
Wheat	1,387	3,098	327	2,748	267
(%)	91	99	63	94	75
Rice	10	-	32	-	60
(%)	1		6		17
Dry Onion	-	-	16	-	-
(%)			3		
Tomato	-	-	2	-	-
(%)			1		
Potato	127	4	80	148	15
(%)	8		15	5	4
Alfalfa	-	14	43	20	13
(%)		1	8	1	4
Clover	-	4	23	-	2
(%)			4		

Source: UNIDATA, June-October, 1990

Wheat, rice, potato and alfalfa are among the most important seasonal crops in Samangan province. Of the total cultivated area for the seasonal crops, 93 percent is used for wheat, 4 percent for potatoes, one percent for rice and another one percent for alfalfa. The largest share of the land going to wheat crop is in Hazrat Sultan where the crop is

grown on 99 percent of the area under seasonal crops. The smallest portion of the land used for wheat is in the district of Roi Doab where only 48 percent of the land is used for that purpose. Potatoes are grown on 15 percent of the land in Khulm, and on 4 percent of the land in Samangan, having the largest and the smallest share of the crop in the province respectively. The district with the largest share of land for rice production is Samangan where the crop is grown on 17 percent of the area under seasonal crops. The district on top for growing alfalfa and clover is Khulm.

IV.5 Farm Inputs and Incentives

IV.5.1 Seeds

The SCA survey does not provide any information regarding the use of different varieties of seeds in Samangan province in 1978. However, the farmers from the province residing in refugee camps have reported the use of different varieties of seeds in that year. The survey found that 32 percent of the farmers in camps were using improved irrigated wheat seed. Of them, 13 percent were using their own seeds and 16 percent were purchasing it from the government. However, the proportion of farmers in camps using improved seed by 1987 was drastically reduced to only 3 percent, depicting a 91 percent reduction. In the same year, none of the farmers were using improved variety of seed from the government source and only 2 percent were using their own seed. Procurement of improved variety of seed from both sources, therefore, declined by 100 percent and 85 percent, respectively (SCA,1990b,p.28).

Table IV.4: Prices and Availability of Seeds

(prices in Afs./kg)

Items/District	Darai Soof	Khulm	Roi Doab	Samangan
Wheat	200	116	192	-
Rice Long	-	-	-	384
Rice Short	-	-	-	192

Source: UNIDATA, June-October, 1990

In Samangan province in 1989, according to the SCA survey, the seed application rate for irrigated wheat was 5 seers per jerib and seed cost was Afs.448 per seer (SCA,1990b,pp.35,38). According to the UNIDATA survey, in 1990, wheat seed was available at an average price of Afs.169 per kilogram (or Afs.1,183 per seer), the price varying from Afs.116 per kg in district Khulm to Afs.200 in district Darai Soof. Shortage of wheat seed is reported from Samangan district. Long and short varieties of rice seed were

available at Afs.384 per kg and Afs.192 per kg, respectively, but only in Samangan district. As shown in Table IV.5, there is a shortage of both rice seed varieties in the rest of the province.

IV.5.2 Fertilizer

According to the SCA survey, in 1978, 33 percent of the farmers who grew irrigated wheat used both white and grey fertilizer; the rest did not use any. Quantities of fertilizer used were well below the national average, at 0.68 bags per jerib for white (Urea) and 0.55 bags per jerib for grey (DAP). Yield of irrigated wheat was 48 seers per jerib without using any fertilizer and 65 seers per jerib when both the varieties of fertilizer were used. In 1987, the proportion of farmers using both types of fertilizer increased by 40 percent, probably because of the proximity of Samangan province to a Urea factory located in the Soviet Union. That ratio came down in the following years, which might have happened because of the lack of extension services and credit in the province (SCA,1990a,pp.36,80).

The SCA survey further reports that, in 1989, 81 percent of the farmers in Samangan province were using no fertilizer at all, 7 percent were using only white, 2 percent were using only grey and 10 percent were using both grey and white fertilizers. Quantities of fertilizer used were very small. Number of bags of fertilizer applied per jerib were 0.16 for white, 0.13 for grey and 0.30 for both white and grey. The use of fertilizer led to significant differences in crop yield. In the case of irrigated wheat, the crop yield was 40 seers per jerib without using any fertilizer, 47 seers per jerib with the use of only white and 64 seers per jerib with the use of both white and grey fertilizers (SCA,1990c,Tables:124-125,n.p.).

Table IV.5: Prices of Fertilizer

(prices in Afs./kg)

Items	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Samangan
DAP	106	100	78	104	102
UREA	66	-	56	90	52

Source: UNIDATA, June-October, 1990

The UNIDATA survey provides prices of different types of fertilizer in various districts. The white fertilizer was available at an average price of Afs.66 per kilogram and the grey fertilizer at an average of Afs.98 per kg. The price per kg of white fertilizer varies from Afs.52 in Samangan to Afs.90 in Roi Doab. The white fertilizer was in short supply in Hazrat Sultan. Grey fertilizer was available at an average price of Afs.98 per kg, the

price varying from Afs.78 per kg in Khulm to Afs.106 per kg in Darai Soof. District-wise fertilizer prices are given in Table IV.6. According to VITA, in June 1987 price per bag was Afs.570 for grey and Afs.930 for white fertilizer (VITA,1990,n.p.).

IV.6 Farm Power

According to the SCA survey, Samangan before the war was among the most "oxenized" provinces of Afghanistan, the average number of oxen per family being one pair. Before the war, all the farmers in Samangan had their own oxen, the average number of jeribs per oxen being 54 (SCA,1989a,pp.10-11). In 1989 the situation had changed considerably, with 2 percent of the farmers in the province not owning any oxen, 37 percent owning only one ox and 60 percent having a pair or more (SCA,1990c,Table 111,n.p.).

The SCA survey also shows that 6 percent of the farmers hired tractors and 7 percent hired oxen for farming. The average cost of hiring was Afs.1,400 per hour for tractors and Afs.1,200 per day for oxen (SCA,1990c,Table s:119-121,n.p.).

To compensate for the decline in the ownership, the farmers started to share the oxen. By 1985, nearly a quarter of all the farmers were using shared oxen, the proportion remaining the same until 1987 (SCA,1989a,pp.19-20).

In Samangan province, price per pair of oxen was Afs.50,000 in June 1987 and Afs.240,000 in December 1989, according to VITA, marking a 480 percent increase in the price in just 30 months (VITA,1990,n.p.). Pre-war and the latest price for a pair of oxen are not available but the price trend clearly shows the enormous cost of replacing the farm power lost during the war. Although there is a tradition of tractor use in Samangan, yet tractors were not available in Darai Soof and Roi Doab; in the rest of the districts they were available at a very high price. The highest price for a tractor, according to the UNIDATA survey, was Afs.2,700,000 in Hazrat Sultan and the lowest price was Afs.2,400,000 in Samangan district, as shown in Table IV.7.

Table IV.6: Price of Tractor

(prices in 000 Afs.)

Item	Hazrat Sultan	Khulm	Samangan
Tractor	2,700	2,500	2,400

Source: UNIDATA, June-October, 1990

I. BASIC ADMINISTRATIVE AND ECONOMIC FEATURES

I.1 Administrative Features

Samangan province is located in the north of the country, bordering the Soviet Union. The provinces surrounding it include Kunduz in the north-east, Baghlan in the south-east, Bamyan in the south, Jowzjan in the south-west and Balkh in the west. The province is part of the agro-ecological region of the North, which also includes the provinces Faryab, Balkh and Jowzjan.

Administratively the province is divided into four Woloswalis (districts) and two Alaqadaris (smaller districts). The Woloswalis are named Darai Soof, Khulm, Roi Doab and Samangan. The Alaqadaris are called Hazrat Sultan and Kaldar. Kaldar was until recently part of the Khulm district, and is presently under the control of the government in Kabul. The city center located in Samangan district is called Aibak. Some basic features and physical characteristics of the province are given in Table I.1.

Table I.1: Administrative Divisions and Physical Characteristics

Name of District	Admin. Status	Area (sq.km.)	Altitude (meters)
Darai Soof	Woloswali	3,433	1,300
Hazrat Sultan	Alaqadari	1,138	850
Khulm (+Kaldar)	Woloswali (Alaqadari)	4,247	420
Roi Doab	Woloswali	2,887	2,230
Samangan	Woloswali	3,760	990
Total	Province	15,465	420-2,230

Source: Compiled from DRA, 1986

The area of the province is 15,465 square kilometers. Hazrat Sultan with 1,138 sq.km. is the smallest district and Khulm (including Kaldar) the largest in terms of area. The districts of Roi Doab and Darai Soof have the second smallest and the second largest areas, respectively.

Eighmy gives higher values for areas of most districts. According to him the total area of the province is 16,640 sq.km. and the areas of the districts, in square kilometers, are 4,456.3 for Darai Soof, 1,140 for Hazrat Sultan, 764.1 for Kaldar, 4,233.8 for Khulm,

Table IV.7: Farm Machinery and Equipment in Selected Villages

Machinery & Equipment	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Samangan
Tractors	-	-	8	4	-
Threshers	-	-	3	-	-
Mills	42	5	31	53	12
Ploughs	1,500	632	920	1,525	593
Tillers	-	-	-	2	1

Source: UNIDATA, June-October, 1990

In the 40 villages surveyed in the 5 districts by UNIDATA, there were 12 tractors in use; 8 in Khulm and 4 in Roi Doab. Various types of farm machinery and equipment in use in the surveyed villages in various districts are given in Table IV.8.

IV.7 Constraints in Agriculture

Major constraints in agriculture in Samangan province are scarcity of water for irrigation, destruction of the irrigation system caused by the war, lack of extension services for providing protection against crop and animal diseases and locust attacks, lack of improved seeds and fertilizer and absence of a developed water management system. That is confirmed by a survey conducted by the SCA in 1989, when most of the farmers in the province perceived shortage of water to be the most important constraint on the productivity in agriculture. The war effects came next but a much smaller percentage of farmers considered it as their most important problem. Various constraints on crop production with the percentage of farmers reporting were as follows: shortage of rainfall 36 percent, war effects 13 percent, crop damage due to rats 9 percent, crop damage due to insects 8 percent, crop diseases 6 percent, lack of crop protection and scarcity of improved seed 4 percent each, shortage of labor and shortage of farm power 3 percent each, scarcity of fertilizer 2 percent and animal diseases 1 percent (SCA,1990c,Table 132,n.p.). The agricultural constraints reported by the farmers in each district during the UNIDATA survey are presented in Table IV.9.

Table IV.8: Major Constraints in Agriculture

Name of District	Agricultural Constraints
Darai Soof	Shortage of water, damaged juis, no dams to control floods, lack of fertilizer, improved seeds, insecticides and equipment, weeds, shortage of oxen, animal disease, no veterinarians
Khulm	Shortage of water, no karezes, tractors not functional, no veterinary service
Hazrat Sultan	Shortage of water
Roi Doab	Shortage of water, loss of cattle head due to war, lack of chemical fertilizer, pesticide, farm equipment and improved seeds, no veterinary service
Samangan	Shortage of water, lack of availability of fertilizer, no veterinarians

Source: UNIDATA, June-October, 1990

IV.8 Marketing

Samangan province is situated at Afghanistan's most important trade route with the Soviet Union. Commercially important port of Heiratan is located at this trade route. Fruits, animal products and handicrafts are exported from Samangan to other areas of Afghanistan and foreign markets. Before the war, coal was also exported from one of the districts but its extraction has been halted due to the war. Marketing of various products by different districts is described below.

In **Darai Soof**, sheep and goats are traded to purchase food, fuel and clothes. Wool is exported to Kabul and foreign markets. Before the war, high quality coal was mined in the district and exported to Kabul and other cities. No advanced mining facilities exist at present and people use rudimentary methods to dig out coal on a limited scale. There are two bazaars in the area, one with about 250 shops located in Dehi, the new center of the district, and the other with about 600 shops located in the old center. The shops include tea stalls, restaurants, cloth and food stores, etc.; cobblers, tailors, blacksmiths, tinsmiths, carpenters and auto mechanics are also available in the bazaars. Galims and woolen clothes are produced in the area and shop keepers bring other items from Mazar-i-Sharif and Aibak.

Khulm produces woolen carpets, khurgines (a special galim put under the horse saddle), silk, knives and scissors. Cloth, galims and carpets are exported to markets abroad. There are 800 shops in the city of Tajqurgan where food, drugs and clothes are

sold. There are a large number of skilled workers in the area including carpenters, shoe makers, tinsmiths, ironsmiths, tailors, coppersmiths, wood carvers, galim makers and carpet makers. Pomegranates, almonds and raisins from the district are exported to Kabul, India and Pakistan. Sheep and goats are also bred for trade purposes.

In **Hazrat Sultan** galims, woolen carpets and leather products are produced by people at home. Big traders provide money and raw materials for production of these goods. Carpets and galims are exported to the foreign countries. The district lies on the main highway which connects Kabul with Mazar-i-Sharif and touches the Soviet border at the important port of Heiratan. The highway has been damaged at some points due to bombing and passing of tanks and artillery during the war.

There is a bazaar in **Roi Doab** which opens for two days in a week. The shops there suffered extensive damage during the war and have been rebuilt recently.

There are many merchants in **Samangan** district. It is located near the main highway and there is frequent import and export of goods with the Soviet Union. The main exports include wool, woolen carpets, galims, pistachios and pomegranates. Wheat, mung beans, peas and melon are exported from Aibak to the other areas of Afghanistan. Dry apricots, almonds and pistachios are also exported to domestic and foreign markets. Food and other commodities are imported from Jawzjan, Faryab and Balkh and local produce is exported to the Soviet Union and Western Europe. In Aibak city there is a large bazaar with about 300 shops selling clothes, food, carpets and drugs. Services of tailors, radio repairmen, mechanics, coppersmiths, ironsmiths and tinsmiths are also available. There are tea shops, sarais and restaurants in the bazaar as well. Cattle, goats, karakul sheep, leather and wool are also produced in the area for commercial purposes.

Table IV.9: Market Infrastructure

Nature of Market	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Samangan
Bazaar	2	2	1	3	1
Sarai	35	0	0	20	20

Source: UNIDATA, June-October, 1990

Although Samangan district has the largest number of merchants and it is a great trading center of Samangan province, Roi Doab district has the largest number of bazaars (3 in number) and Darai Soof happens to have the largest number of sarais (35 in number). Darai Soof also has the largest number of shops compared to the other districts. However, of the 3 bazaars reported for Roi Doab only one is operational, and that too usually for two days a week. The district seems to have a big market infrastructure but low

turnover of goods. Hazrat Sultan is situated on the highway connecting with the Heiratan port but no bazaars or shops are reported to be functioning here. It is possible that due to the damages caused to the highway during the war, the district lost its important commercial role in the province. There are no sarais in the districts of Hazrat Sultan and Khulm. The market infrastructure in each district is shown in Table IV.10.

V. ROAD, TRANSPORT AND COMMUNICATION

V.1 Transport System

Buses, trucks, jeeps, horses and donkeys are used for transportation purposes in different districts of Samangan. Transport system is important not only for trade, marketing and travel purposes but for the very survival of people in Samangan. This critical importance of the transport system arises from the fact that most of the districts in Samangan are food deficit and most of the wheat is purchased by the villagers from traders outside the village. A dependable transport system is also needed for trade with the Soviet Union through the port of Heiratan.

Vehicles reported in **Aibak city** are buses, trucks, cars and Russian jeeps. Horses are also used for transport purposes.

In **Darai Soof** there are 60 trucks for transporting goods and passengers to and from Aibak and Mazar-i-Sharif; no regular transport system is reported from other districts.

V.2 Road Infrastructure

Most of the roads passing through various districts of Samangan province are dirt roads which are not maintained by any agency and many bridges and culverts have been broken along the routes. The major paved road is the highway coming from Kabul and going to Mazar-i-Sharif, Shebergan and Faryab. There are two other paved roads passing through the district of Khulm.

There are 3 dirt roads passing through **Darai Soof** district. All those roads are in a bad shape due of lack of maintenance. On Sholgara-Darai Soof road 4 bridges and 5 culverts have been partially damaged and 5 bridges and one culvert are destroyed. Along Samangan-Darai Soof road 20 bridges have been destroyed and 5 culverts are partially damaged. On the road between Abkhorak and Darai Soof, one bridge and 10 culverts are partially damaged and 24 bridges have been destroyed.

There are 2 paved roads in **Hazrate Sultan** district and both are unmaintained. All the 6 culverts have been destroyed on the road between the centre of the district and Samangan. There are 9 culverts on the road between the district centre and Khulm and all of those have been destroyed.

The highway passing through Kabul, Mazar-i-Sharif, and Heiratan port also passes through the district of **Khulm**. That route has been mainly used by the Kabul government to transport military supplies and equipment through Heiratan port. The Mujahideen have been attacking the government vehicles along that route. Between 1979 and 1984 many attacks by the Mujahideen and counter-attacks by the Soviets took place, due to which the highway has been damaged at many points. Another paved road, 15 kilometer

west of Tajqurgan city, is also damaged at many points. Bridges and culverts have been damaged on the dirt road coming from Kunduz district because of the war. The road remains closed for 4 months during the winters due to rains and bad weather. Due to the war, 6 bridges and 48 culverts have been partially damaged and 7 bridges and 15 culverts have been destroyed along the 3 roads in the district.

There are 3 gravel roads in **Roi Doab** district. All those roads are unmaintained. The road system in the district has sustained heavy damages. In total, 235 bridges and 160 culverts have been partially damaged and 200 bridges and 170 culverts have been destroyed along the 3 roads.

In **Samangan** district there is a paved highway coming from Kabul and going to Mazar-i-Sharif, Shebergan and Faryab. The road, passing from north of Aibak city to Khulm, used to be a very important trade route, connecting the markets of Kabul, Pul-i-Khomri, Heiratan border and Mazar-i-Sharif. Food and other commodities were imported through that route from Jawzjan, Faryab and Balkh and local produce was exported to the Soviet Union and Western Europe. The same route was used by the Soviet Union to transport heavy warfare equipment to Kabul during the war which caused damages to the road at many points. Many points along the highway are reported to have been mined. There are 3 dirt and 2 paved roads in the district and all of those are unmaintained. Along the routes, 7 bridges and 25 culverts have been partially damaged and 4 bridges and 8 culverts have been destroyed.

The details of existing road conditions are provided in Annex.'D'; Table V.1 gives the overall condition of roads in various districts of Samangan.

Table V.1: Nature and Condition of Roads

Condition of Roads	Darai Soof	Hazrat Sultan	Khulm (*)	Roi Doab	Saman-gan
Dirt Roads No.	3	-	3	3	3
Damaged/Unkept	3	-	3	3	3
Paved Roads No.	-	2	-	-	2
Damaged/Unkept	-	2	-	-	2

* = gravel road

Source: UNIDATA, June-October, 1990

Total area covered by roads in Samangan is 2,283,000 square meters. None of the roads is being maintained at present. There were 864 bridges along these roads, of which 351 are still intact; 253 bridges are partially damaged and the rest of 260 have been destroyed. Of the 763 culverts along the roads, 296 are reported to be still intact; 253 culverts are partially damaged while 214 are destroyed. The details regarding the damage to roads in Samangan are given in Table V.2.

Table V.2: Damage to Roads in Samangan

Nature of Damage to Roads		No.	%
Bridges	Total	864	100
	Intact	351	41
	Partially Damaged	253	29
	Destroyed	260	30
Culverts	Total	763	100
	Intact	296	39
	Partially Damaged	253	33
	Destroyed	214	28

Sources: UNIDATA, June-October, 1990

VI.3 Communication Network

Communication system for civilians is almost non-existent in Samangan. Whatever basic communication facilities existed in any part of the province have been damaged due to the war. At present some communication facilities are being used by the Mujahideen and the government in the districts of Darai Soof and Khulm only.

Old communication system in Khulm district has been destroyed and the only means of communication being used by the Government and the Mujahideen is the wireless system.

There is no electricity or communication facility available in Roi Doab district.

The major constraints to the communication system is various districts, as identified by the UNIDATA, are given in Table V.3.

Table V.3: Major Constraints in Communication

District	Major Constraints in Communication
Darai Soof	No electricity, telephone or telegraph service
Hazrat Sultan	No telephone or telegraph service
Khulm	Old communication system destroyed, No telephone or telegraph service
Roi Doab	No electricity, telephone or telegraph service
Samangan	No telephone or telegraph service

Source: UNIDATA, June-October, 1990

VI. OTHER PHYSICAL INFRASTRUCTURE

VI.1 Energy and Power Supply

The usual sources of energy used in households in Samangan, as determined through the UNIDATA survey, are described in Table VI.1.

Table VI.1: Usual Household Energy Sources

Name of District	Energy Sources
Darai Soof	Kerosene, firewood, coal, charcoal, animal dung
Hazrat Sultan	Kerosene, firewood, coal, animal dung
Khulm	Electricity, kerosene, firewood, charcoal, animal dung
Roi Doab	Firewood, coal, animal dung
Samangan	Kerosene, firewood, coal, charcoal, animal dung

Source: UNIDATA, June-October, 1990

Khulm is the only district provided with the electricity. The usual energy sources in use in the households are kerosene, firewood, coal and animal dung. Kerosene, however, is not much in use in Roi Doab district. The prices of the energy items in various districts are given in Table VI.2.

Table VI.2: Prices of Household Energy Items

(prices in Afs.)

Energy Item	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan
Kerosene/gallon	800	950	1,000	800	700
Firewood/kg	-	41	41	14	25
Coal/kg	2	2	-	2	2
Charcoal/kg	-	52	41	-	68
Dung/kg	-	7	4	-	4

Source: UNIDATA, June-October, 1990

At the time of the UNIDATA survey mission, kerosene was available in all the districts at an average price of Afs.850 per gallon, the price ranging from a minimum of Afs.700 in Samangan district to Afs.1,000 in district Khulm. Shortage of firewood was reported from Darai Soof; in other districts the price of firewood ranged from Afs.14 to Afs.41 per kilogram (kg), the average price being Afs.30 per kg. Coal was available at Afs.2 per kg but was in short supply in Khulm. The average price per kg of charcoal was Afs.54, but the item was reported to be short in Darai Soof and Roi Doab. Animal dung was also not in adequate supply in Darai Soof and Roi Doab, its average price in the rest of the districts being Afs.5 per kilogram.

The prices of fuel for vehicles, collected during the UNIDATA survey from various districts, are presented in Table VI.3.

Table VI.3: Prices of Fuel

(prices in Afs.)

Fuel Item	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan
Petrol/gallon	700	900	1,200	600	650
Diesel/gallon	800	950	1,000	800	700

Source: UNIDATA, June-October, 1990

At the time of the survey, petrol and diesel were available in all the districts. The price of petrol ranged from Afs.600 per gallon in Roi Doab to Afs.1,200 per gallon in Khulm, the average price being Afs.810 per gallon. The price per gallon of diesel ranged from Afs.700 in Samangan to Afs.1,000 in Khulm, the average price being Afs.850.

It may be noted that the large fluctuation in prices is due to many factors, including the security situation in the area, the situation of supply, the accessibility of the area, etc. The prices, therefore, not only fluctuate from one place to another at a given time but also at a given place from time to time. The price data, therefore, cannot be used for planning purposes.

VI.2 Water Supply

The usual water supply sources for household consumption in various districts are given in Table VI.4.

Water from wells is commonly obtained in Samangan province. The table shows that jui (small stream) is available as a water source in the districts of Darai Soof, Roi Doab and Samangan. People also obtain water from springs and melted snow almost throughout the province. Hauz (water pond) as a source of water supply is only used in

2,907.2 for Roi Doab and 3,137.5 for Samangan (Eighmy,1990,n.p.). While the area of Darai Soof is much larger, according to Eighmy, the area of Samangan is appreciably lower, compared to the Afghan government figures.

The altitude of Roi Doab is the highest with 2,230 meters and that of Khulm (including Kaldar) the lowest with 420 meters. According to Eighmy, Kaldar has the lowest altitude of 305 meters, compared to any other district. Relative to the other districts, Darai Soof, Hazrat Sultan and Samangan have medium-high altitude. The altitude of the province, therefore, ranges between 305-2,230 meters.

The mountainous district of **Darai Soof** is located in the south-west of Samangan province. Most of its area comprises of deep valleys which extend from the south to the north with large pastures around the mountains. The weather here is very cold in the winters due to the snowfall but summers are somewhat warm. The small Darai Soof river has usually very little water and becomes completely dry during the summers. The center of the district is called Dehi where most of the inhabitants are of Tajek origin. The majority of the people in the district belong to the Hazara tribes and speak Dari. Some people also belong to the Uzbek tribes. The district is under the Mujahideen control and is administered by a shura called Wahdat.

The district of **Hazrat Sultan** lies in the north of Aibak city and is named after a famous saint who is buried there. The district comprises of flat desert area due to which it becomes quite hot during the summers while the winters are slightly cold. The center, also named after the district, and some adjoining areas are under the control of the Kabul government who also have a military base there. The rest of the district is governed by the Mujahideen. The inhabitants belong to the Tajek, Uzbek and Pashtoon tribes and speak their respective languages. The UNIDATA survey team could not cover the areas under the Kabul government control.

The district of **Kaldar** is located in the north of Samangan province bordering the Soviet Union, with Amu river flowing along its northern and eastern boundaries. The district is fully controlled by the Kabul government and was not accessible to the UNIDATA survey team, due to which no information about the place could be collected.

The district of **Khulm** is located in the north of the province. Most of its area is flat but the southern part comprises of a mountainous range called Alburz. It snows in the winters here, but the climate during the summers is hot and dry. The center of the district is called Tajqurgan city which is controlled by the Kabul government. Clashes between the government troops and the Mujahideen still occur in the area, and some government military bases are also reported to be located there. The UNIDATA survey team was unable to cover the areas under the control of Kabul government.

The district of **Roi Doab** is located in the southern part of the province. It is situated in valleys, surrounded by high mountains and pastures. The winters are very cold

Darai Soof. No information was available on the water sources in Hazrat Sultan.

Table VI.4 Usual Household Water Sources

Name of District	Type of Water Source
Darai Soof	Jui, hauz, well, spring, melted snow
Khulm	Well, melted snow
Roi Doab	Jui, well, spring, melted snow
Samangan	Jui, well, spring, melted snow

Source: UNIDATA, June-October, 1990

VI.3 Shelters and Public Buildings

VI.3.1 Extent of Damage to Shelters and Public Buildings

The information provided in this section is based on the survey of 40 main villages in the five districts of Samangan province. The effects of war on shelter and other types of buildings in those villages are summarized in Table VI.5.

Table VI.5: Damage to Buildings due to War

Type of Building	Total	Intact	Light Damage	Heavy Damage	New Const.	Under Repair
Shelter	25,969	16,470	4,503	3,430	889	677
Shop	1,264	600	248	295	29	92
Office	41	-	1	40	-	-
School	22	1	-	21	-	-
Restaurant	60	22	13	28	1	2
Health Center	5	-	2	3	-	-
Warehouse	2	-	-	2	-	-
Mosque	293	215	30	29	8	11

Source: UNIDATA, June-October, 1990

Substantial damage is done to shelters and other buildings due to the war. At the time of the UNIDATA survey, although 63 percent of the shelters were intact, 30 percent had suffered heavy or light damages. Twenty-three percent of the shops were completely destroyed while another 20 percent had suffered partial damage. Almost all the school and office buildings had been destroyed. Of the restaurants, 47 percent had been destroyed while another 22 percent had suffered light damages. The mosques suffered the least damage, 73 percent of which were intact.

VI.3.2 Effects of War on Shelter and Public Buildings in Districts

In this section, details of damage done to various types of buildings in 8 main villages, covered by the survey in each district, are presented.

In **Darai Soof**, there were 4,600 shelters 66 percent of which remained intact. Of the rest, 15 percent were partially damaged and 9 percent were completely destroyed. Two hundred and sixty-five shelters were newly constructed and another 200 were under repair.

Of the 689 shops, 52 percent were intact while 26 percent had been destroyed; another 16 percent had suffered light damages. Forty shops were under repair while 4 were newly constructed. In addition, all the 30 office, one clinic and 8 school buildings were completely destroyed.

Other completely and partially damaged buildings included 23 restaurants and 22 mosques.

In **Hazrat Sultan**, 87 percent of the total of 2,472 shelters were reported to be intact. The proportions of destroyed and partially damaged shelters were 5 percent and 6 percent, respectively. Eighteen shelters were newly constructed.

The other buildings suffering partial or complete damage included 6 shops and 3 mosques.

In **Khulm**, 52 percent of the total of 2,916 shelters were intact; the proportions of destroyed and partially damaged shelters were 31 percent and 17 percent, respectively. In addition, of the 90 shops 22 were partially damaged and 5 were destroyed. Other destroyed or damaged buildings included 4 restaurants and 8 mosques.

In **Roi Doab**, 54 percent of the total of 12,330 shelters were reported to be intact. The completely damaged and partially damaged shelters were 15 percent and 23 percent, respectively. Newly constructed shelters numbered 570 and another 450 shelters were being repaired.

Of the 421 shops, 33 percent were intact, 26 percent were partially damaged

and 23 percent were destroyed. The other partially damaged and destroyed buildings included 11 offices, 12 schools, 14 restaurants, 4 clinics and 18 mosques.

In **Samangan**, there were a total of 3,651 shelters, 83 percent of which were intact. The destroyed and partially damaged shelters comprised 6 percent and 9 percent, respectively, of the total. In addition, 36 shelters were newly constructed and 15 were under repair.

Thirty of the 46 shops were intact, 11 were destroyed and 5 were partially damaged. Other buildings destroyed or damaged included one school, 4 restaurants and 11 mosques.

VI.4 Storage Facilities

There are very few regular storage facilities in the province, as shown in Table VI.6.

Table VI.6: Available Storage

Storage	Khulm	Samangan
Warehouse: Total	2	1
Average Capacity (cub.m)	3,600	6,000
Intact	2	1
Sarai: Total	12	20
Average Capacity (cub.m)	-	1,440
Intact	-	15
Repairable	12	5

Source: UNIDATA, June-October, 1990

The two warehouses in Khulm are intact, with an average capacity of 3,600 cubic meters. Additional storage is available at 12 sarais but the capacity available there could not be determined. All the sarais need repairs. Samangan district has one warehouse with the capacity of 6,000 cubic meters and 20 sarais with an average capacity of 1,440 cubic meters. Five of the sarais are in need of repairs.

VII. HEALTH

VII.1 Health Facilities and Services

There are very few health facilities in Samangan province and the existing ones are generally very poorly equipped in terms of qualified staff and equipment. As earlier shown, there have been a significantly large number of casualties due to the war, which means that the population has suffered a great deal in the absence or inadequacy of the health facilities. Some basic health indicators reflecting the current state of health facilities in various district are provided in Table VII.1.

Table VII.1: Basic Health Indicators

Name of District	No. of Clinics	Pop./ Doctor	Pop./ Dentist	Pop./ Nurse
Darai Soof	1	48,082	-	-
Roi Doab	2	6,822	-	13,644
Samangan	5	1,498	2,355	2,060
Province	8	4,803	8,370	7,146

Source: UNIDATA, June-October, 1990

There are in all 8 clinics in the province of which 5 are in Samangan district alone. Two districts of Hazrat Sultan and Khulm do not have any clinic; as earlier mentioned, however, substantial area in the two districts is under the Kabul government control and no information could be collected from there. Samangan district has comparatively the most favorable population/doctor ratio, with 1,498 people served per doctor. The most unfavorable ratio is found in Darai Soof where 48,082 people depend on one doctor. For the whole province, each doctor serves an average of 4,803 people. Dentists are only available in Samangan district with 2,355 people to a dentist. Nurses are available in only two districts with 13,644 people to one nurse in Roi Doab and 2,060 people per nurse in district Samangan. For the whole province, there are 6,975 persons to a nurse. The ratios for the whole province, however, could be more favorable as population in the areas under Kabul government control are also included in the statistics presented here.

The absence or shortage of qualified medical staff reflects on the medical services available to the population which are found to be very restricted, as shown in Table VII.2.

Table VII.2: Medical Services Available

Name of District	Type of Medical Service
Darai Soof	OPD
Roi Doab	OPD
Samangan	OPD, surgery, anaesthesia, mobile first aid, tuberculosis treatment, dental treatment

Source: UNIDATA, June-October, 1990

Only Samangan district could boast of offering medical services with a relatively wider scope; the hospitals there offer surgery, tuberculosis treatment and dental treatment besides the outdoor treatment. In addition, mobile first aid facility is also available in the district. On the other hand, only outdoor treatment is available in Roi Doab and Darai Soof.

The daily frequency of outdoor treatment provided by each clinic, based on the average of last three months prior to the survey, is given in Table VII.3.

Table VII.3: Outdoor Patient Daily Attendance per Clinic
(average of three months)

OPD Average per Clinic	Darai Soof	Roi Doab	Saman-gan
Total Patients	28	68	66
Male Patients	17	35	39
Female Patients	11	33	27

Source: UNIDATA, June-October, 1990

The frequency of the daily patient attendance is the highest in Roi Doab, followed closely by Samangan district. In Darai Soof, the patients average 28 per day. The frequency of female attendance compared to the males is the highest in Roi Doab. No vaccination services for children are available in any of the districts.

The availability of various kinds of equipment at health facilities in two districts is given in Table VII.4. There is no equipment worth the name available at the only health

facility in Darai Soof.

Table VII.4: Equipment and Facilities in Clinics

Name of District	Equipment/Facilities Available in Clinics
Roi Doab	6 beds, 1 manual suction, 1 adult scale
Samangan	490 beds, 30 oxygen equipment, 14 sterilization equipment, 51 suture equipment, 6 manual suction, 4 operation theater, x-ray units, 8 dental chairs, 5 microscopes, 4 each adult & baby scales, 8 ambulances, 2 generators

Source: UNIDATA, June-October, 1990

The health facilities in district Samangan are relatively well equipped compared to the other district of Roi Doab. In Samangan, a relatively large admission capacity is available at the health facilities. Oxygen supply, operation theaters, x-ray units, dental chairs, ambulances, etc. are available in sufficient quantities.

The common ailments reported in the province by the UNIDATA survey are given in Table VII.5.

Table VII.5: Common Ailments

District	Common Ailments
Darai Soof	Respiratory problems, measles, malnutrition
Roi Doab	Diarrhoea, tuberculosis, anemia, headaches
Samangan	Respiratory problems, diarrhoea, measles, headaches

Source: UNIDATA, June-October, 1990

Common ailments are reported only from 3 of the districts. Respiratory problems are quite common, and so are persistent headaches. Malnutrition in children and anemia are also frequently reported. Tuberculosis is reportedly common in Roi Doab, and measles are found in Darai Soof and Samangan.

The prices and availability of essential medicines varies from one district to the other, as shown in Table VII.6.

The table shows that 4 of the 9 essential medicines listed are scarce in the

districts of Samangan and Hazrat Sultan. Darai Soof and Roi Doab face scarcity of 3 essential medicines. Two medicines are in short supply in Khulm. The medicines in short supply are Chloroquine, Bacterin and Vormex, the first two being not available in any of the districts and the third only found in Khulm. Saline Solution is also not available in two of the five districts.

Four of the five available medicines are priced the lowest in Samangan, compared to the other districts. The average price and the price range of the listed medicines are given in Table VII.7.

Table VII.6: Prices and Availability of Medicines

(prices in Afs.)

Name of Medicine	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan
1. Aspirin	12	9	10	10	6
2. Chloroquine	13	12	15	10	5
3. Rifamycin	-	-	-	-	-
4. Penciling	210	150	200	200	110
5. ORS	32	70	10	30	40
6. Ampicillin	500	300	500	500	200
7. Saline Solution	2,000	-	2,000	2,000	-
8. Bacterin	-	-	-	-	-
9. Vormex	-	-	60	-	-

Note: Units for listed medicines are ‘ tablet’ for 1, 2, 3, 8 & 9, ‘ ampule’ for 4, ‘ packet’ for 5 & 7, and ‘ bottle’ for 6.

Source: UNIDATA, June-October, 1990

Table VII.7: Prices Range and Average Prices of Medicines

(prices in Afs.)

Name of Medicines	Average Price	Price Range
1. Aspirin	9	6 - 12
2. Chloroquine	11	5 - 15
3. Rifamycin	-	-
4. Penciling	174	110 - 210
5. ORS	36	10 - 70
6. Ampicillin	400	200 - 500
7. Saline Solution	2,000	-
8. Bacterin	-	-
9. Vormex	60	-

Note: Units for medicines are same as in Table VII.6
Source: UNIDATA, June-October, 1990

VII.2 Condition of Health Facilities in Districts

The only clinic in **Darai Soof** is run by the Swedish Committee and is reported to be very poorly equipped. The doctors working there are reported to be not qualified. There was a hospital in the district in pre-war days which has been destroyed during the war. Infant mortality is reported to be rather high in the district. People buy medicines without doctor's prescription, based on their own experience and judgement.

There is no health facility in **Hazrat Sultan** and people have to travel to Mazar-i-Sharif or Aibak for treatment.

There is one private clinic and a hospital in Tajqurgan, the district center of **Khulm** under the control of the Kabul government. The population in the Mujahideen controlled area avoid going to those facilities for treatment for fear of being persecuted by the authorities. Instead, they travel to Mazar-i-Sharif and Peshawar and those in critical condition often die on the way.

The two health facilities in district **Roi Doab** consist of a hospital and a clinic. The Sardar Shapesand hospital building is in a very dilapidated condition due to the damage

done to it during the war and needs extensive repair. The clinic is assisted by the German Afghan Committee but is reportedly not functioning regularly. Only the outdoor treatment facility is available at the clinic.

The five health facilities in **Samangan** district include the two government hospitals of Aibak and Sarandoy and three clinics of Rabani, Dara Jowandoon and Ghazi Mard. All the three clinics are run by the Mujahideen and are reported to be very poorly equipped. The clinics offer only the outdoor treatment and very often face acute shortage of medicines. Both the hospitals are in a relatively very good condition with adequate equipment and staff. The medicines in the hospitals are distributed free of charge. Facilities of outdoor treatment, surgery, tuberculosis and dental treatment and mobile first aid are available at both the hospitals.

VIII. EDUCATION AND TRAINING

VIII.1 Educational Facilities

The three types of educational institutions in Samangan province include the mosques, the madrassas and the primary schools. Mainly religious instruction is given to children in the mosque schools whereas in madrassas young males are given religious instruction and are also taught some other subjects. In Table VIII.1 the number of various kinds of educational institutions in different districts is given.

Table VIII.1: Types of Educational Institutions

Type of Institution	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan	Total
Primary School	15	2	8	13	24	62
Madrassa	12	-	8	20	6	46
Mosque	46	80	140	50	210	526

Source: UNIDATA, June-October, 1990

There are in all 62 primary level schools in the province. Samangan district alone accounts for 39 percent of all primary schools, followed by Darai Soof and Roi Doab where 24 percent and 21 percent, respectively, of the schools are located. Hazrat Sultan has the lowest proportion of 3 percent of the schools in the province. The state of education facilities in the province is illustrated by the education indicators presented in Table VIII.2.

The table shows that the number of teachers per school is most favourable in districts Hazrat Sultan and Samangan, where 4 teachers, on average, are available to teach the primary level students. The ratio is most unfavorable in district Darai Soof with only 2 teachers per school to take care of the primary level teaching. The teacher/school ratio for both Khulm and Roi Doab is 3. For the whole province (leaving out district Kaldar which could not be covered by the UNIDATA survey), there are 3 teachers to each primary school.

The enrollment per school is 126 for the whole of the province. The least enrollment ratio is witnessed in district Khulm with 11 students per school and the highest enrollment ratio is found in district Roi Doab where 169 students are studying in each school. In districts Darai Soof, Samangan and Hazrat Sultan the number of students per school are 139, 135 and 115, respectively. There are no schools for females in the districts of Hazrat Sultan, Khulm and Roi Doab. In Darai Soof, there are about 23 female students as compared to each male student enrolled. The male/female student ratio is most favorable in district Samangan with 1.6 female students enrolled per male student.

with heavy snowfall but the climate becomes warm in the summers. The majority of the people here belong to the Hazara tribes but some Uzbek and Pashtoon tribes also live here. The district is under the control of the Mujahideen.

The center of **Samangan** is called Aibak city, which is surrounded by rural area. The city is under the Kabul government control while the rural area is administered by the Mujahideen. The district receives some snowfall during the winters but it is warm and dry in the summers. The river of Aibak does not have enough water and in summers becomes dry. The majority of the population consists of Tajeks who speak Dari but Uzbek, Pashtoon and Turkhman tribes also inhabit the district and speak their respective languages. A special breed of horse, called Tatar, is raised here for the traditional game of 'buzkashi'.

I.2 Economic Infrastructure

As determined by the UNIDATA field survey (for survey methodology, see Annex.'A'), the rural industry is relatively more prevalent in the districts of Darai Soof and Khulm, as shown in Table I.2.

Table I.2: Small Scale Rural Industry

Name of District	Rural Industry
Darai Soof	Woolen carpets, jelak, galim & namad, hand loom cloth, silk, leather & leather products, karakul skin, vegetable oil, honey
Hazrat Sultan	Woolen carpets, galim & namad, karakul skin, straw mats
Khulm	Woolen carpets, jaldek, galim & namad, handloom cloth, silk, leather & leather products, karakul skin, straw mats, wood carvings, baskets, vegetable oil
Roi Doab	Woolen carpets, galim & namad, leather & leather products, karakul skin, vegetable oil
Samangan	Galim & namad,karakul skin, straw mats, wood carvings, reed, steel products, vegetable oil

Source: UNIDATA, June-October, 1990

Woolen carpets, galim and namad and karakul skin are made in almost all the districts. In addition, leather and leather products, handloom cloth, silk and vegetable oil are produced in Darai Soof and Khulm. Hazrat Sultan has very few rural industries.

Table VIII.2: Education Indicators

Education Indicators	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan
Teachers/School	2	4	3	3	4
Students/Teacher	56	29	30	49	36
Enrollment/School	139	115	11	169	135
Males/Female Student	22.8	*	*	*	1.6

* No female students were reported to have been attending schools.

Source: UNIDATA, June-October, 1990

The exact statistics at the provincial level regarding the sex and age distribution and enrollment at various educational levels are not available; for that reason, it is difficult to calculate precisely the ratio of enrollment at various educational levels to the eligible part of population. Here, however, an attempt is made in that direction using various sources available. Eighmy projected the 1990 population of Samangan province to be 312,524 which, after subtracting for population of Kaldar district (not covered by the UNIDATA survey) comes to 301,055 (see Table II.3). In the population distribution curve presented by Yusuf, which also gives breakup according to age and sex, the males and females in 5-10 years age group represent about 7.5 percent and 7.3 percent, respectively, of the country's total population in 1972-73 (Yusuf,1990,p.19). Assuming that age and sex ratios did not change significantly over the 17 years period, and that the two national level ratios also hold true at the provincial level, the number of males and females in the 5-12 years age group in Samangan province (except Kaldar district) comes to 22,579 and 21,977, respectively. These segments of population are eligible for enrollment at primary and middle levels. In the province, therefore, the 5-12 years age group in 1990 population has a male/female ratio of 1.02:1, or 51 percent males and 49 percent females.

Now, if the data presented in Table VIII.2 is taken as more or less reflecting the actual sex enrollment proportions, in the province there are about 5 male students to every female student enrolled; in other words, male students comprise 83 percent of the total enrollment, the female student share being 17 percent. This shows how great is the imbalance between male and female enrollment, in a population where the number of both the sexes is almost equal. If the number enrolled, as determined by the UNIDATA survey, of 7,844 students is taken as the total enrollment in schools in the province, 82 percent of the population eligible for enrollment in the primary and secondary schools were out of the school system. Of the total eligible males, only 29 percent were attending school while the proportion of eligible females in schools was much less, being only 6 percent.

IX. RESETTLEMENT NEEDS AND IMPLICATIONS FOR DONOR ASSISTANCE

IX.1 Resettlement Needs and Planning Implications

Samangan province has generally escaped the attention of most international agencies involved in resettlement and reconstruction planning in Afghanistan. It is not surprising, therefore, that very little information is available on conditions inside the province. The present report, in that sense should provide useful insights into the resettlement issues concerning the province.

Samangan is divided in terms of administrative control between Mujahideen and the Kabul government. The latter control many key areas. However, the people have carried on with many social and economic transactions across this division which, on one hand, underlines their sense of survival even under hostile condition and, on the other, perhaps a different perception of the conditions than that held by either of the parties to the conflict. Many of the small industry products and fruits grown in the province, therefore, are regularly exported to the areas under Kabul government control and across the border to the markets in the neighboring Soviet Union.

The trade, however, has suffered considerably due to the war. The main highway linking the province to the Soviet Union was a scene of many battles, leading to its destruction at numerous places. Road infrastructure, to begin with, was rudimentary comprising mostly of dirt roads. The break down of civil authority due to the war resulted in the lack of maintenance of this vital infrastructure and degeneration of the road conditions. The war also destroyed or seriously damaged the indigenous market infrastructure and displaced many craftsmen; the already fragile and depleted transport system has been decimated. Consequently all that has led to a substantial erosion of trade, commerce and other economic activities.

The province consists of mountainous area and valleys as well as flat land. Irrigation has always been a problem as sufficient water has never been available for that purpose. The situation has been further aggravated due to neglect and direct impact of the war, with water channels being destroyed or seriously damaged. The main damage to agricultural production, has been caused by the collapse of extension services, with problems of pest and locust attacks assuming catastrophic proportions. In some districts, more than half the crop has been destroyed due to pest and locust attacks, in recent years. Those problems are further aggravated by an acute shortage of manpower in the agricultural sector. Scarcity of good quality seeds has also been reported from most districts. Once a self-sufficient province in farm power, Samangan now faces acute shortages in that area as well as many animals perished either due to bombings or due to disease. Veterinarian services in the province are non-existent. The terrain is generally unsuitable for the use of tractors which, in any case, are outside the purchasing power of most farmers.

The district which suffered the most due to the war include Darai Soof, Khulm and Roi Doab. A large proportion of shelters and other buildings in the three districts were destroyed or damaged and many people were killed or rendered disabled. Reconstruction work has been rather slow, both due to the dearness of construction material and the shortage of manpower.

Food shortages were also reported from all the districts, wheat being scarce in 3 of the 5 districts surveyed. The prices of most food items are on a higher side and in some districts some people had to resort to distress sale by selling their household belongings in order to purchase food.

The condition of health facilities is very poor, especially in areas under Mujahideen control. Trained medical staff and essential medical equipment are non-existent. In many areas, there is no health facility. People travel to distant places, including Peshawar, to receive treatment and many patients reportedly expire on the way. No special arrangements for treatment of women exist. There are no immunization facilities for children either. Most essential medicines are scarce and those available are rather costly.

The condition of educational institutions is no better. Trained teachers and educational material are in short supply and buildings are in state of decay. The overwhelming majority of population eligible for enrollment is out of the school system, female enrollment being almost negligible.

Based on the findings presented in preceding chapters, the main constraints identified in each district are given in Table IX.1

Table IX.1: Sectoral Damages due to war

District	War Damages and Consequences
Darai Soof	Scarcity of wheat, irrigation system damaged, pest and weed problems, locust attacks, scarcity of quality seeds, shortage of farm power, animal disease, scarcity of household energy items, substantial destruction of and damage to shelters & other buildings, lack of storage facilities, inadequate health and educational facilities, scarcity of medicines, no vaccination services.
Hazrat Sultan	Scarcity of skilled and unskilled workers, limited rural industry, scarcity of irrigation water, scarcity of quality seeds & fertilizer, lack of marketing structure & storage facilities, absence of health facilities & services, scarcity of medicines, inadequate educational facilities

Khulm	Scarcity of unskilled workers, presence of mines, scarcity of wheat, pest & locust attacks, scarcity of quality seeds & irrigation water, lack of marketing structure, substantial destruction of damage to shelters & other buildings, lack of medical services, shortage of medicines, inadequate educational facilities.
Roi Doab	Presence of mines, scarcity of wheat, acute shortage of farm power, large-scale locust attacks, shortage of quality seeds, animal disease, inadequate supply of household energy items, substantial destruction of damage to shelters & other buildings, no storage facility, inadequate medical facilities and services, shortage of medicines, inadequate educational facilities.
Samangan	Shortage of skilled & unskilled workers, scarcity of irrigation water & quality seeds, scarcity of medicines.

IX.2. Sectoral Needs and Rehabilitation Programs

In response to the needs identified in Table IX.1, the Food and Agricultural Organization (FAO) has implemented a project aimed at controlling locust and pest attacks in the province. Besides providing technical assistance, the FAO also aims to deliver insecticides, pesticides and spray equipment to the farmers. The total project budget amounts to US$ 881,400 and the project areas include, besides Samangan, the province of Herat, Badghis, Faryab, Jawzjan, Saripul and Balkh. Another proposed project aims at improving the conditions of water supply and sanitation in the urban areas. The total project cost (in kind) is proposed to be US$ 7,000,000, covering urban populations in Samangan, Kunduz, Maimana, Mazar-i-Sharif, Pul-i-Khumri and Jalalabad.

It is evident that the donor assistance is not matched by the resettlement requirements of the province. The project focussing on the pest and locust control addresses the most pressing need of the agricultural sector, as a very large proportion of the crop was destroyed due to those problems. The information available is not sufficient to determine as to what extent the need of the province was met by that project which also involved 6 other provinces. Such an assessment is very much needed, so that the scope of the project could be enlarged to cover the affected areas left without any assistance.

The next important area for UN intervention in the agricultural sector seems to be the supply of irrigation water, which has been reported to be scarce in most districts. While there would be objective limitations to water supply in an area like Samangan, the supply could be maximized by introducing suitable measures. In Samangan, the methods

adopted for water storage are reported to be primitive, resulting in considerable loss of water. Technical assistance coupled with some material aid, would help to address this pressing issue.

As in most provinces in Afghanistan, the road infrastructure is in very bad condition in Samangan province. However, its importance for Samangan is rather high as it has a direct bearing on the local production and its export. People in Samangan have heavily relied on trade with the neighboring Soviet Union and other provinces in Afghanistan. The commodities have included small industry products and fruit. In the absence of an adequate road infrastructure and transport system, production of the local small industry has been badly affected and fruit gets destroyed. Restoration of this basic infrastructure would greatly contribute in rehabilitating the provincial economy.

Provision of essential health services is another crucial area for UN intervention. In some districts there are no health facilities and in others their condition and performance is very poor. Patients have to travel to distant places to receive treatment and some expire during the journey. Immunization services for children are non-existent. Training of health workers and providing essential equipment to the clinics in the province are priority tasks in the health sector.

In education, repair of school buildings, training of teachers and provision of educational materials are the activities requiring attention. Possibilities may also be explored to provide vocational training in trades locally in demand.

Annex.'A'

UNIDATA FIELD SURVEY

Objectives of the Survey

The UNIDATA survey was originally conceived with the following objectives:

a. to determine the effects of war, both in qualitative and quantitative terms, on various sectors of Afghanistan's economy and society, at the level of the district,

b. to assess, at the level of the district, the short term resettlement needs of the refugees and the priority areas for restoration of infrastructure required for initial rehabilitation, and

c. to point the direction for long-term development planning.

Admittedly, those were ambitious targets for the reasons that, firstly, the conditions of conflict that have persisted even after the regular hostilities ceased were a big security hazard, making certain areas virtually inaccessible for the purposes of the survey and, secondly, the financial resources needed for conducting such a survey, especially in highly insecure conditions which even make the provision of logistics for the survey team a very expensive proposition, were huge and beyond the capacity of the UNIDATA project. Simultaneously, the concerned U.N. organizations were stressing for data that could be used for assessment of immediate resettlement and reconstruction needs and could be quickly generated. A detailed socio-economic survey was, therefore, not possible as it required relatively stable conditions to serve the purposes of sample selection and distribution and data collection, adequate finances and sufficient time for data analysis.

With the above limitations and requirements in view, it was decided to organize reconnaissance type of surveys leading to area-specific sectoral assessment of the current situation. The objective behind that exercise was to specify sectoral priorities in undertaking relief and resettlement work by various UN organizations and the non-government organizations (NGOs). To compensate as much as possible for the lack of detailed socio-economic data, it was decided to incorporate in the survey report the findings of the few other relevant studies available.

Methodology of the Survey

The questionnaire for the survey consisted of 14 sub-questionnaires addressing the most pressing multi-sectoral issues. The issues included in the questionnaire were

determined on the basis of consultations with the UN organizations involved in the resettlement programs in Afghanistan. The questionnaire was pre-tested in district Maruf of Kandhar province, followed by further consultations with the UN organizations and NGOs on questionnaire design; the questionnaire was revised and finalized in early April, 1990.

A 'Manual of Instructions' was also prepared for the use of data collectors and the data collection supervisors. Both the manual and the questionnaire were translated into Dari, as both the data collectors and the supervisors were to be Afghans. The data collectors were selected with extreme caution, keeping in view the abilities required to both understand and carry out the process of data collection and organize the activity with minimum possible bias, given the difficult situation inside Afghanistan. For the supervisors, in addition to the above qualities, the administrative abilities to solve difficult situations, resolve on-the-spot logistic problems and check if data collection was carried out according to the prescribed method and schedule were considered essential.

Following the selection, the data collectors and the supervisors had to undergo an extensive training both in the survey methodology and the questionnaire administration in Peshawar. For Samangan province, 12 data collectors and 3 supervisors were selected and divided into three teams; each team was assigned specific districts. The teams left for the province in July 1990, and returned after completing the task in October 1990, a period of about three months. The data collection went by without encountering any major difficulty, except that the district of Kaldar and some areas in districts Khulm, Hazrat Sultan and Samangan could not be surveyed, being under the control of the Kabul government.

According to the survey design, a part of the questionnaire addressing the issues related to effects of war on population, refugee movement, agriculture and livestock, food and shelter and buildings was administered at the level of selected main villages in each district. In the earlier survey of Wardak province, the number of main villages covered was 2, which was not considered adequate to represent the picture of the whole district. For subsequent surveys, therefore, the number of villages was raised to 8 per district. The sub-questionnaires seeking to know the presence of mines at specific places and the loss and damages caused due to mines were also administered at the level of the main villages. Further, the condition of agriculture was determined through individually interviewing 10 landholders in each village (for names of the surveyed villages, see Annex.'B'). Other information was gathered by interviewing in a group the area notables who usually included the area Mujahideen commanders, teachers, health practitioners, prominent landowners, mullahs (religious preachers), shopkeepers, etc. Admittedly, the data gathered through such a technique would hardly satisfy the requirements of a sound survey design. The method was, however, adopted keeping in view the restraints already mentioned and with the view that both qualitative and, to a lesser extent, quantitative insight would be gained as to how the war had affected the local economy and the individual existence. In addition, the in-depth village level survey was to provide an assessment of priority sectors where resettlement programs could be introduced.

The second part of the questionnaire was addressed at the institutional level in the sectors of health and education. The data collectors were required to visit each existing health and education facility in a district and administer the questionnaire to the responsible official/professional working at the facility. The aim here was to find out the existing state of those facilities with as many details as possible. In some cases, the state of security did not permit the data collectors to actually visit the facility; in such a case, the concerned official/professional was interviewed at another suitable location.

The third part of the questionnaire addressed the issues related to food and storage, industry and marketing, road and transport, power, telecommunication and water, prices of various commodities, etc. That part was administered at the level of the district, by interviewing informed persons with similar positions as mentioned in case of the village level survey except that those selected as respondents had a greater exposure to the developments at the district level; for those interviews the former maliks, who used to be village headmen representing the village community to the district administration, were considered to be very suitable, but most of them were found to have left the area and taken refuge either in Pakistan or Iran. The strategy to interview the 'key informants' in groups seemed to be successful, because if a participant's reply was not thought to be factually correct by other participants a discussion ensued and the correct situation was determined.

Presentation of the Study

As earlier mentioned, the present study relies on the findings of both the UNIDATA survey and other studies relevant to Samangan province and the topics included here. The methodology followed by the studies quoted are also discussed, where such information is available, so that the reader could have an assessment of the validity of the findings presented. Short references of studies quoted are given in the text in parentheses, with last name of the author, year of publication and the page number(s) appearing in the same order. If the year of publication and the page number are not available, the respective signs used are 'n.d.' and 'n.p.'. Full references of the quoted studies appear at the end of the report.

The report analyses the impact of war on various sectors of the economy at the level of the district in the first eight chapters. Inter-district comparisons are given with as much of detail as the availability of data would permit. The findings of the UNIDATA survey are supplemented by data available through other sources, where possible. It is hoped that the analytical approach followed shall help the planners to assess sectoral resettlement needs at as small a geographical level as the district.

The UNIDATA survey addressed only some principal issues concerning agriculture at the level of the locality (village). The main reason for not covering that sector comprehensively was because it has received a detailed treatment in the survey conducted by the Swedish Committee for Afghanistan (SCA). In presenting the situation of agriculture in the province, therefore, the relevant findings of the SCA survey are taken to be the main

data source. The findings of the UNIDATA survey are also presented as an aggregate of 8 villages covered at the district level and are claimed to be fairly representative of the trends at that level.

The findings of the locality level survey, covering 8 main villages in each district (for names of the villages surveyed, see Annex.'B'), are presented in each relevant chapter, with the view to highlight how people have suffered due to both direct and indirect effects of the war and to put the sectoral analyses presented in various chapters in perspective. The findings are particularly focussed on the effect of the war on the village population, agriculture, food supply and housing. The location of mines and unexploded devices around the localities are also given, where reported.

In the final chapter the resettlement needs in relation to sectoral assessments are indicated.

Annex.'B'

NAMES OF MAIN VILLAGES COVERED BY UNIDATA SURVEY

District	Main Villages
Darai Soof	Darai Soof, Tangi Yaqoob, Chobaki, Dehi, Shaikha, Pas Qul, Chai Chal, Pesh Qul
Hazrat Sultan	Orlamash, Chochman, Serqiya-i-Afghaniya, Qaflani, Koka Bulaq, Naeeman, Agha Gunbad, Amil
Khulm	Oljatoo, Guzer-i-Chehil Aiwan, Baghat-i-Ismail Baig, Khwaja Burhan-i-Tajekiya, Qosh Mawla, Guzar-i-Young Ghariq, Guzar-i-Namaz Gah, Char Diria
Roi Doab	Roi Doab, Abkhorak-i-Sufla, Surkh Qala, Qashaqa, Moho, Chail, Do Aab Shah Pesand, Abkhorak-i-Ulya
Samangan	Baba Qamber, Dara-i-Zhwandoon, Sar Kunda, Samangan-i-Kalan, Qarya-i-Jofth, Qarya-i-Color, Qarya-i-Ghazi Mard, Qarya-i-Langar

Besides being engaged in agriculture, the people in **Darai Soof** also breed sheep, goats, horses, donkeys and cattle. The animals are traded in the market to purchase food, clothes and other household utilities. Wool is exported to Kabul and the neighboring countries. There is a large coal mine in the district where coal was extracted regularly by the government before 1979. The coal was supplied to Kabul and other parts of the country, and is reported to be of a high quality; it is now dug by the local people using rudimentary methods.

In **Hazrat Sultan**, the production of small industry is controlled by some big traders who supply raw material to the skilled workmen and export the finished products to the neighboring countries. The district does not have any bazaars or markets. The district touches the Soviet Union at an important trade port called Heiratan.

Of the small industrial products in **Khulm**, handloom cloth, galims and carpets are exported to the neighboring countries and also supplied to other parts of Afghanistan. Of the fruit grown in the district, pomegranates, almonds and raisins are exported to Pakistan and India, and are also supplied to the markets in Kabul. The road linking Mazar-e-Sharif to the Soviet port of Heiratan also passes through the district.

In **Roi Doab** coal is extracted from mines in the localities of Ulia, Balgali and Chail. A copper mine is also reported in Balgali but the metal was not being extracted at the time of the survey.

There are many traders in **Samangan** district who are engaged in exporting goods to the neighboring countries and other parts of Afghanistan and importing goods mainly from the Soviet Union. The main exports include wool, carpets, galims, pistachios, almonds, dry apricots and pomegranates. Wheat, mung beans, peas and melons are supplied to markets inside Afghanistan, especially to Kabul.

I.3 State of Manpower

In the survey of 8 main villages in each district (for names of the villages surveyed, see Annex.'B'), the availability of manpower in various skills was determined, as given at Table I.3.

At the time the survey was undertaken, Hazrat Sultan was facing shortage of karez makers, carpet weavers, silk weavers, midwives and unskilled laborers. Karez makers, carpet weavers, mid wives and unskilled laborers were also short in Samangan. Khulm was short of silk weavers, drivers and unskilled laborers, and Darai Soof of silk weavers. No shortages were reported from Roi Doab. At the level of the province, the largest shortages were reported of silk weavers and unskilled laborers, followed by midwives, karez makers and carpet weavers.

It may be noted that the figures given in Table I.3 do not represent the

Annex.'C'

Studies in Agriculture and Methodological Limitations

Systematic data on agriculture in Afghanistan has been absent even in pre-war days. The Afghan Government statistics available, especially for the period of war, are not considered to be much credible. The second source of information is the Agricultural Survey of Afghanistan, conducted by the Swedish Committee for Afghanistan (SCA), with the central objective of determining the effects of war on the country's agricultural sector. The SCA claims that it was "the largest, most wide ranging and most comprehensive survey of agriculture ever conducted in Afghanistan in peace or war" (SCA,1988,p.4). While the claim is intended to stress on the merits of the initiative taken, it also underscores the dearth of efforts aimed at studying a sector which has always been most crucial to the country's economy. Just how much ground still remains to be covered could be judged from the limited scope of the SCA survey; in the authors' own words, the study "does not attempt to present aspects of the whole picture of agriculture such as total area farmed, total production of wheat (and other crops), or any other kind of a census" (SCA,1988,p.3). What is available are the factors affecting the farm family and "trends in production, means of production, farm resources, and physical farm inputs which have occurred over the last ten years" (SCA,1988,p.4).

To begin with, it would be necessary to establish the limitations of the SCA study, so that the parameters are clearly defined within which the findings must be interpreted. The study had aimed to cover all the provinces but, unfortunately, could not cover Kandahar as some problems were encountered during the process which resulted in the rejection of all the interview forms. The results presented by the study for that province are based on interviews with Afghan refugees from the province in Pakistan, and the authors want the readers to treat those results "with caution" (SCA,1988,p.45,f.n.1).

The survey claims to cover about 1 percent of the farming households, based on estimates that the total rural population inside Afghanistan was 7 million, the refugees in Pakistan and Iran were 5 million, adding up to 12 million as the country's total rural population. The number of households are calculated to be 1.2 million, on the basis of the survey's finding that the household size was 10. As the total number of interviews included in the tabulations were 11,000 (including 1,301 community interviews), the sample constituted nearly 1 percent (exactly 0.92 percent) of the total farm households. It has been earlier shown that the household size of 10 was on a rather higher side, and that the figure of 8.5 would be more nearer to the reality (see Chapter II:Population). If that size is accepted, the number of farm families would increase to 1.41 million. Further, the number of interviews conducted with individual farmers is actually 9,699, as the community interviews were conducted mainly to assess the qualitative aspects and do not form part of the tabulations presented in the report. In this way, the actual sample coverage comes to 0.69

percent of the total farm households which may not be sufficient to give a representative picture.

The SCA study does not provide the distribution of sample with respect to provinces. It is not known if the distribution corresponded to the number of farm owners (or farm households) in a province. That, however, appears doubtful as out of the total of 20,000 individual farmer interviews conducted, only 9,699 were retained; the rest of 10,301 interviews had to be discarded being sub-standard. It is not known if some provinces were over-represented in the 51 percent discarded interviews. In fact, that would almost certainly be the case as, firstly, the proportion of discarded interviews is very large and, secondly, the discarded interviews could not have been evenly distributed among the provinces. It leads to the disturbing conclusion that some (or most?) of the provincial "trends" presented may not be representative.

Organizing the survey was a commendable achievement on part of the SCA, as conducting that exercise in war time must have posed many obstructions. In fact, the First Report of the SCA describes some of the difficulties in data collection, where the process had to be suspended or carried on in adverse, even hostile, conditions (SCA,1988,p.11). All that, however, leads to inescapable doubts about the accuracy of the data collected.

Another methodological aberration seems to be to rely too heavily on the memory of individual farmers over the time span of a decade. Within the specified ten years, questions were asked relating to the five years of 1978, 1980, 1985, 1986 and 1987. In general, one would need extra-ordinary memory to remember all the fine details which have been asked in the interviews. Farmers, in particular, are not known for keeping account of such details. In fact, the authors of the survey have tried to generate a time series data in a very peculiar fashion, which one would find hard to accept even in a war situation.

Keeping the above limitations in view, only selected and broad conclusions from the SCA survey are presented here, which may also be viewed with some reservation. The results presented here mainly draw on the part of the survey related to farmers in Afghanistan, and only in cases where significant differences between the two categories exist a reference to the refugee part of the survey is made.

CONDITION OF ROADS IN SAMANGAN

Road Route	Width	Condition	Length in (000)	Bridges I	Bridges P	Bridges C	Culverts I	Culverts P	Culverts C
Darai Soof									
Sholgara-Darai Soof(D)	9	U	90	1	4	5	5	5	10
Samangan-Darai Soof(D)	9	U	15	0	0	20	5	0	0
Abkhorak Ulya-Darai Soof(D)	9	U	20	0	1	24	0	10	0
Hazrat Sultan									
Centre of Alaqadari-Samangan (P)	6	U	3	1	0	0	0	0	6
Center of Alaqadari-Khulm (P)	6	U	5	2	0	0	0	0	9
Khulm									
Pul Khumri-Mazar (G)	4	U	9	10	2	0	1	20	5
Zanjir Ga-Abdan Shir Alam (G)	4	U	10	6	2	4	40	8	5
Khrm-Tashqughan (G)	3	U	10	5	2	3	3	20	10
Roi Doab									
Qara Kotal Bamyan-Mazar Sharif (G)	9	U	70	90	80	70	90	60	70
Qara Kotal Bamyan-Samangan (G)	9	U	30	80	65	50	70	40	30
Baghlan-Samangan (G)	9	U	12	80	90	80	87	60	70
Samangan									
Center of Aibak-Roi Doab (D)	3	U	20	1	6	3	0	10	0
Center of Aibak-Darai Soof (D)	3	U	10	3	0	1	0	0	8
Center of Aibak-Puli Khumri (P)	6	U	*	20	0	0	0	6	0
Center of Aibak-Hazrate Sultan (P)	6	U	*	52	0	0	0	4	0
Center of Aibak-Babai Qambar (D)	3	U	2	0	1	0	0	5	0

Note:

Bridges & Culverts
I=intact
P=partly damaged
C=completely damaged

Roads
P=paved
D=dirt
G=gravel

Contition
U=unmaintained

Length
*= not known

Annex.'E'

RESETTLEMENT PROJECTS IN SAMANGAN REPORTED BY ACBAR/SWABAC

1. Education Projects

Project Description	Khulm	Roi Doab	Saman -gan
Primary O Education D	2 1	1 -	2 -
Others O	1	-	-

Note: O = ongoing projects
D = discontinued projects

2. Food Projects

Project Description	Khulm
Cash for Food D	2

3. Health Projects

Project Description	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan
Inpatient O P	- 1	- -	- -	- -	1 -
Immunization O P	- -	- 1	1 -	- -	- -
Comp.Health O	-	-	-	1	-
B.H.Center O	-	1	-	2	1
B.H.Post O D	3 2	2 -	3 2	- 2	10 -
Dental O	-	-	-	-	1

Note: P = planned projects
Comp. = comprehensive
B.H. = basic health

4. Projects in Agriculture

Project Description	Khulm	Roi Doab
Field Crops O	1	-
Veterinary P	-	1
Traction O	1	-
Tech.Assistance D	1	-

5. Income Generation Projects

Project Description	Samangan
Assist Vulnerable P	1

6. Water Resource Projects

Project Description	Khulm
Other Water Resources O	1

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absolute number of workers available in various skilled categories in the districts. The figures, however, do reflect rather accurately the shortage of skills in each district, the sample of 8 main villages per district being sufficiently representative.

Table I.3 Availability of Skilled and Unskilled Labour

Skilled Labor	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Saman-gan
Construction	112	28	64	309	53
Karez making	90	-	20	441	-
Carpenter	129	14	24	227	29
Mechanic	62	3	7	60	4
Carpet weaver	140	-	400	1,250	-
Silk weaver	-	-	-	280	4
Tailor	115	9	10	126	20
Blacksmith	72	3	7	83	11
Coppersmith	82	3	7	88	11
Untrained teacher	182	63	29	174	81
Trained teacher	41	76	17	68	84
Midwife	10	-	45	24	-
Driver	192	14	-	76	27
Unskilled labor	270	-	-	2,510	-

Source: UNIDATA, June-October, 1990

II. POPULATION

II.1 Population Characteristics

The last population census in Afghanistan was conducted in 1979, but remained unfinished due to the change in government and the civil strife that followed at that time. Based on the information gathered the government filled the data gaps by making estimates. The figures for the population of Samangan province, as given by the census, are presented in Table II.1.

Table II.1: Population Characteristics - 1979

Name of District	Settled Population	Pop. Dens./ sq.km.	No. of Households	Avg.No. /Household	No. of Localities
Darai Soof	82,537	24	14,264	5.8	333
Hazrat Sultan	23,690	21	4,003	5.9	62
Khulm	50,367	12	8,694	5.8	43
Roi Doab	24,384	8	3,999	6.0	97
Samangan	80,717	21	12,685	6.3	151
Total	261,693	17	44,005	5.9	685

Source: Compiled from DRA, 1986

The settled population of the province in 1979 was 261,693. The census also determined the urban population to be 33,016, making 12.6 percent of the total population of the province. The urban population of Samangan constituted 6.1 percent of the district's population, and in Khulm it made up an enormous 55.7 percent of the population of the district.

According to the government source, the total area of the province was 15,465 square kilometers with the population density of 17 persons per square kilometer in 1979. There were, in all, 685 localities of which 568 were main villages. On average, there were 382 inhabitants per locality. The total number of households were 44,005, with an average of 5.9 persons in each household.

The population density was the highest in **Darai soof**, being 24 per sq.km., compared to the other districts in the province. The average household size was 5.8 and the total number of households were 14,264. The total number of localities were 333 of which

284 were main villages. There were an average of 248 persons per locality.

In **Hazrat Sultan**, the population density was 21 per sq. km., the second largest compared to the other districts. There were 4,003 households with an average household size of 5.9. The number of localities were 62 of which 56 were the main villages. There were 382 persons per locality.

In **Khulm (and Kaldar)** the population density was 12 per sq.km., being the second lowest in the province. The average household size was 5.8 and the total number of households were 8,694. There were in all 43 localities, all of which were the main villages. On average, there were 1,171 persons per locality.

The population density in **Roi Doab** was 8 per sq.km, the lowest in the province. The households numbered 3,999 and the average household size was 6.0. There were 97 localities of which 71 were the main villages. The population per locality was 251.

Samangan also had the second highest population density, along with Hazrat Sultan, of 21 persons per sq.km. The average household size was 6.3, the highest compared to the other districts, and the total number of households were 12,685. There were 151 localities of which 115 were the main villages. On average, there were 534 persons per locality.

Compared to the household size provided by the Afghan government source, a recent study has provided a different estimate of the same for Afghanistan. The Agricultural Survey of Afghanistan, conducted by the Swedish Committee, determined the average household size to be 10 which is on a much higher side than that given by the government source (SCA,1988,p.7). The definition of household adopted by the two sources is not known which would probably explain the difference in their findings. Studies are not available that provide household size at the provincial level, but it would not differ drastically from the national average.

Table II.2: Average Household Size

Province	Darai Soof	Hazrat Sultan	Khulm	Roi Doab	Samangan
7.2	8.0	6.7	5.6	6.7	9.0

Source: UNIDATA, June-October, 1990

In the UNIDATA survey of localities, the number of households and population in each locality were also determined. Based on that information, the household size for each district has been calculated and presented in Table II.2. It may be recalled that

the locality survey was conducted in 8 main villages per district, involving 40 main villages in all, and its findings are representative of both the districts and the province.

The household size in Samangan province has increased to 7.2 in 1990 as compared to 5.9 in 1979 (see Table II.1). The largest change is registered in Samangan district where the household size increased from 6.3 in 1979 to 9.0 in 1990. In Khulm, the household size has marginally decreased over the same period. A possible explanation of the increase in the household size could be that the insecurity generated due to the war could have forced the families to move together, particularly those linked with each other through ethnic ties. The war, therefore, could have resulted in the average household size to increase, particularly where the direct effects of the war were felt more acutely.

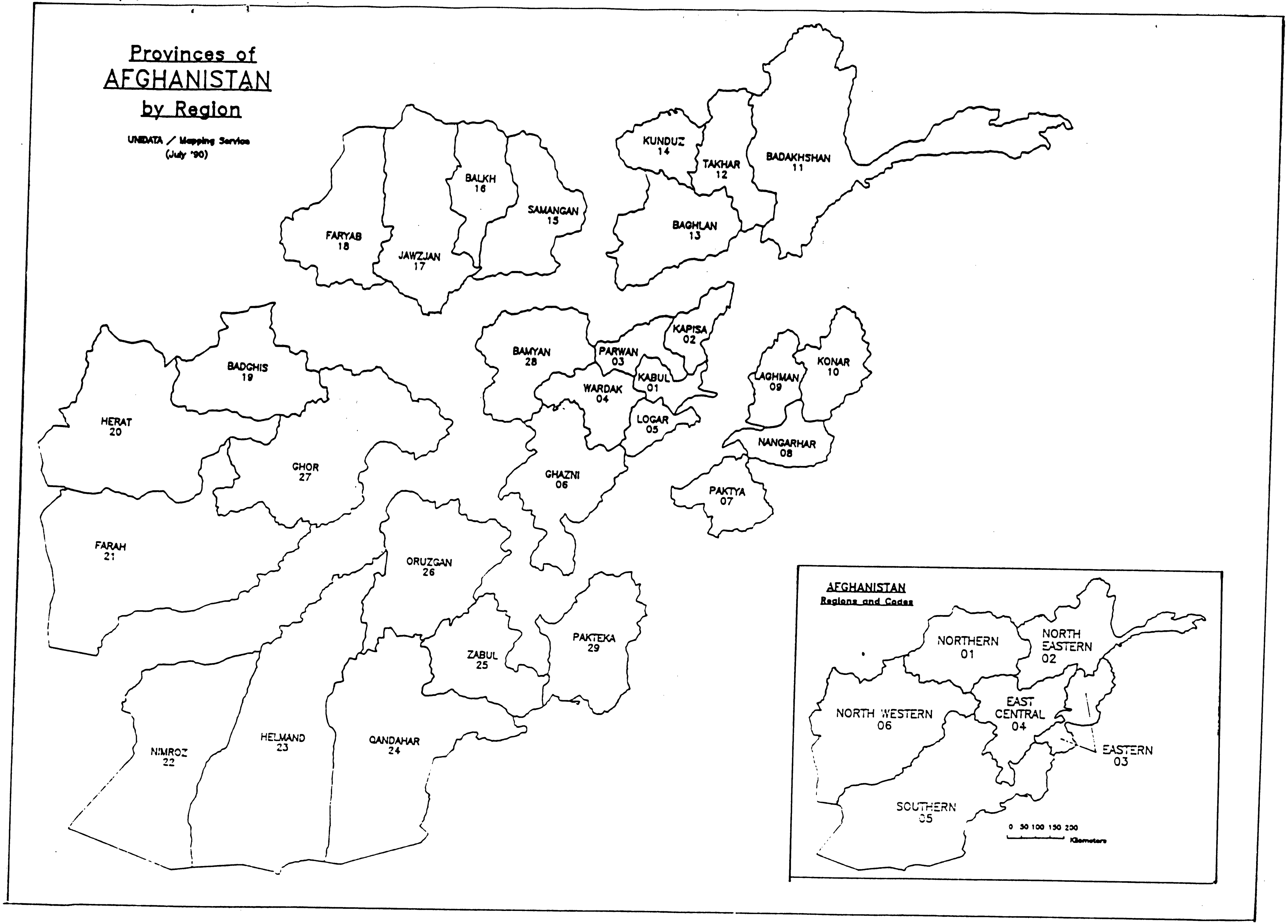
In another exercise, Eighmy has estimated the 1979 population and made projections for 1990 population by relying on a number of sources. For 1979 estimates, original data from the Afghan Demographic Studies (ADS) project was used and projections for 1979 population were made at the district level by using an appropriate growth rate. For 1990 projections, factors of deaths by war, refugees, nomads, internally displaced persons, etc. were calculated based on the UNHCR refugee data and other surveys, and population estimates were worked out using a growth rate of 2.4 percent and making adjustments for the above factors (Eighmy,1990,n.p.).

Table II.3: Population and Refugees - 1979 & 1990

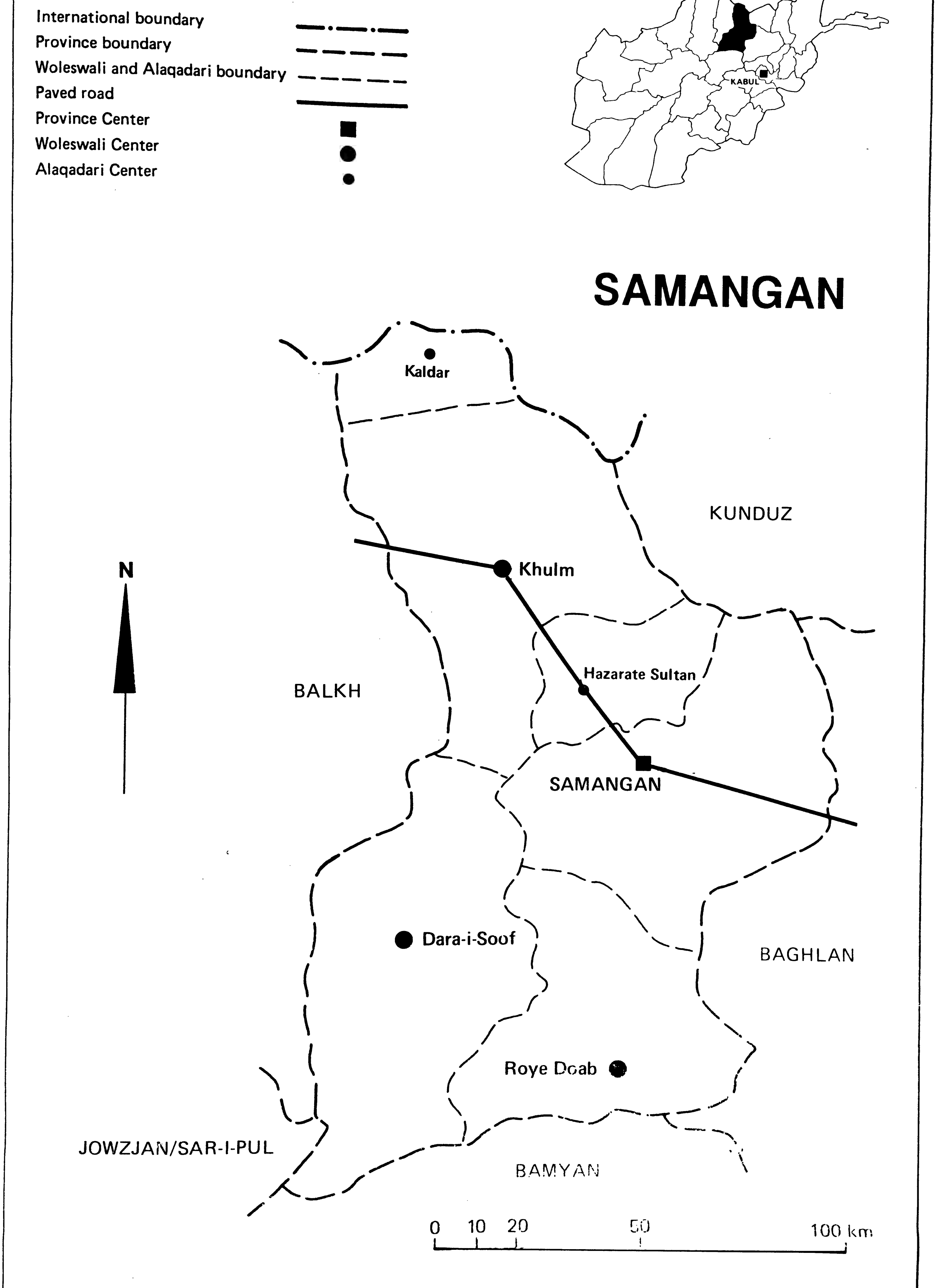
Name of District	Population 1979	Population 1990	Refugees in Pakistan	Refugees in Iran	Adjusted 1990 Pop.
Darai Soof	77,486	96,173	7	-	96,165
Hazrat Sultan	22,241	25,981	6,708	-	19,274
Kaldar	10,225	11,469	316	-	11,153
Khulm	47,286	59,627	2,950	-	56,677
Roi Doab	22,892	28,689	-	1,400	27,289
Samangan	75,779	90,585	8,175	-	82,410
Total	255,909	312,524	18,156	1,400	292,968

Source: Compiled from Eighmy, 1990

Eighmy's estimates of the 1979 population of Samangan province is 2.2 percent lower than the estimates provided by the 1979 census. According to him, the settled population of the province was 255,909 in 1979, increasing to 312,524 in 1990 by 22 percent


Provinces of
AFGHANISTAN
by Region
UNIDATA / Mapping Service
(July '90)
KUNDUZ 14
TAKHAR 12
BADAKHSHAN 11
BALKH 16
SAMANGAN 15
BAGHLAN 13
FARYAB 18
JAWZJAN 17
KAPISA 02
BAMYAN 28
PARWAN 03
KABUL 01
WARDAK 04
LOGAR 05
LAGHMAN 09
KONAR 10
NANGARHAR 08
BADGHIS 19
HERAT 20
GHOR 27
GHAZNI 06
PAKTYA 07
FARAH 21
ORUZGAN 26
PAKTEKA 29
ZABUL 25
NIMROZ 22
HELMAND 23
QANDAHAR 24
AFGHANISTAN
Regions and Codes
NORTHERN 01
NORTH EASTERN 02
EAST CENTRAL 04
NORTH WESTERN 06
EASTERN 03
SOUTHERN 05
0 50 100 150 200
Kilometers

ADMINISTRATIVE BOUNDARY MAP OF
SAMANGAN PROVINCE



Afghanistan

SAMANGAN PROVINCE

A Socio-Economic Profile

UNIDATA
A Project of UNDP/OPS & UNOCA
March 1991

PREFACE

'Samangan Province - A Socio-Economic Profile' provides an analysis of the current state of economic and social conditions and physical infrastructure at the provincial, district and sample locality level. The study is based on the UNIDATA field survey conducted in June-October, 1990. Information provided by other sources on Samangan province is also incorporated to complement and check consistency of data sets.

This is the third of the thirteen reports based on the UNIDATA survey. Next ten socio-economic reports are expected to be completed by early 1992. Consistent with the survey design, the report has been structured to provide sectoral analysis at the district level as well as the sample locality level. The analysis at the district level also offers an assessment of the impact of the war on the local economy, highlighting inter-district variations. This should enable planners to determine sectoral resettlement and rehabilitation requirements at the district level. The sample of eight main villages per district covered provides an understanding of how people have suffered due to both direct and indirect effects of the war.

The methodology of the data collection, as described in Annex A, was formulated in the context of the feasibility of implementing field surveys under the prevailing uncertain conditions on the ground. Nonetheless, consistency of the information gathered has been checked by making reference to information available from secondary sources. However, there should be the possibility of improving the quality of the data sets in future, by accessing updated information as it becomes available from agencies involved in resettlement work in Samangan province.

Comments on the report are welcome and should be addressed to the Officer-in-charge of any one of the four UNIDATA project offices listed at the end of the report.

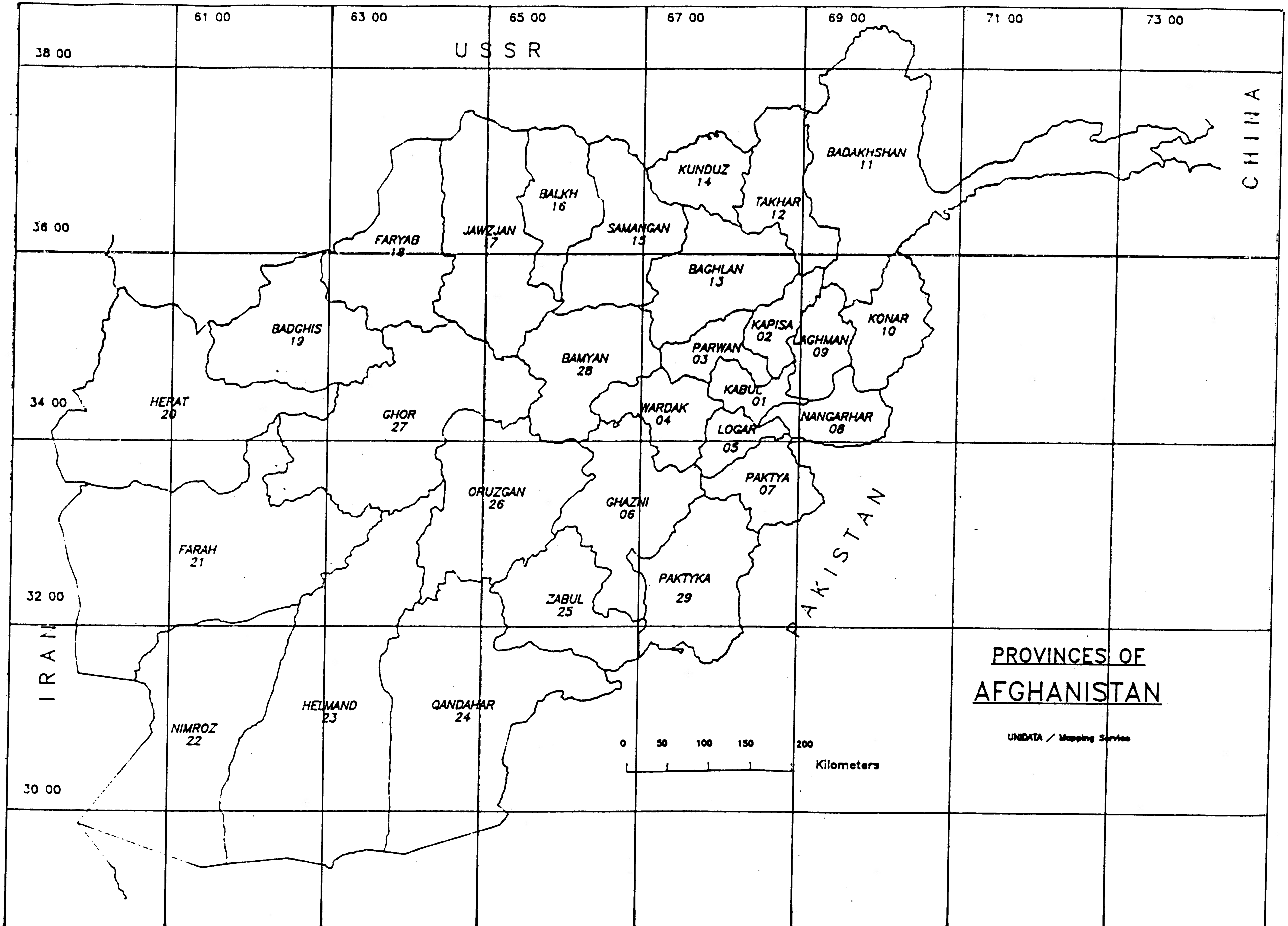
30th March, 1991

Project Manager
UNIDATA

The UNIDATA survey results, and the analysis thereof, presented in this report are those of the UNIDATA project and do not necessarily reflect views of UNDP/OPS and UNOCA.

CONTENTS

TABLES


PROVINCES OF AFGHANISTAN
UNIDATA / Mapping Service
USSR
CHINA
PAKISTAN
IRAN
61 00
63 00
65 00
67 00
69 00
71 00
73 00
38 00
36 00
34 00
32 00
30 00
BADAKHSHAN 11
KUNDUZ 14
TAKHAR 12
BALKH 16
SAMANGAN 15
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ZABUL 25
HELMAND 23
QANDAHAR 24
NIMROZ 22
0 50 100 150 200
Kilometers